

11729.1 contg

TTAGAGAGGCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTGTTTTGT
TTTGTGTTTTGTTTTGTTTTGAGATGGAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
TGATCTCAGCTCGCTGCAACCTCCGCCTCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCC
CAAGTAGCTGGGATTACAGGCGCCCGCCACCACGCTCAGCTAATTTTTTTGTATTTTTAGT
AGAGACAGGGTTTACCAGGTTGGCCAGGCTGCTCTTGAACCTCTGACCTCAGGTGATCCA
CCCGCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCCGGCCCCAA
AGCTGTTTCTTTTGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGT
GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11729-45.21.21.cons1

TAGGATGTGTTGGACCCTCTGTGTCAAAAAAACCTCACAAAGAATCCCCTGCTCATTACA
GAAGAAGATGCATTTAAATATGGGTATTTTCAACTTTTTATCTGAGGACAAGTATCCAT
TAATTATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTATGGGAG
GAGGTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATG
GCCTTTCTGCATGGGAATTATTGAGCTTATTGGAAATGGACAGTTAGCAAAGGCATGGA
CCGGCAGACTGTGTCTATGGCAATTAATGAAGTCTTTAATGAACCTATATTAGATGTGTTA
AAGCAGGGTTACATGATGAAAAAGGGCCACAGACGAAAAAACTGGACTGAAAGATGGTT
TGTAATAAAACCAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGG
AGACATTCTCTTGGATGAAAAATTGCTGTGTAGAGTCCTTGCTGACAAAGATGGAAA

11729-45.21.21.cons2

TTAGAGAGGCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTGTTTTGT
TTTGTGTTTTGTTTTGTTTTGAGATGGAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
TGATCTCAGCTCGCTGCAACCTCCGCCTCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCC
CAAGTAGCTGGGATTACAGGCGCCCGCCACCACGCTCAGCTAATTTTTTTGTATTTTTAGT
AGAGACAGGGTTTACCAGGTTGGCCAGGCTGCTCTTGAACCTCTGACCTCAGGTGATCCA
CCCGCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCCGGCCCCAA
AGCTGTTTCTTTTGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGT
GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11731.1contig

TCTTTTCTTTTCGATTTCTTCAATTTGTCACGTTTGATTTTATGAAGTTGTTCAAGGGCTAA
CTGCTGTGTATTATAGCTTTCTCTGAGTTCCTTCAGCTGATTGTTAAATGAATCCATTTCTG
AGAGCTTAGATGCAGTTTCTTTTCAAGAGCATCTAATTGTTCTTTAAGTCTTTGGCATAAT
TCTTCCTTTTCTGATGACTTTTTATGAAGTAAACTGATCCCTGAATCAGGTGTGTTACTGAG
CTGCATGTTTTTAATTCTTTTCGTTAATAGCTGCTTCTCAGGGACCAGATAGATAAGCTTAT
TTTGATATTCCTTAAGCTCTTGTTGAAGTTGTTTGATTTCCATAATTTCCAGGTCACACTGT
TTATCCAAAACCTTCTAGCTCAGTCTTTTGTGTTTGCTTTCTGATTGGACATCTTGAGTCTG
CCTGAGATCTGCTGATGXTTCCATTCACTGCTTCCAGTTCAGGTGGAGACTTXXCTTCT
GGAGCTCAGCCTGACAATGCCTTCTTGXTCCCT

FIG. 1A

11731.2contig

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACGTACTAAGCATGATA
AACAGTTTGATAACCTCAAACCTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
TTTCCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAATCATCAAGTTA
AAGTTGCAGGGCCAAACAGCTGCCTGTAGTCTCCCTCCTATCATGAAACAACCCCTATGT
TCTCTCCACTAATCTCTGCTCGTTTTGGGATGGGAAGCATGCCCAATCTGTCCATTTCATCAG
CCATTGCCTCCAGTTGCACCTATAGCAACACCCTTGTCTTCTGCTACTTCAGGGACCAGTAT
TCCTCCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTAGTA

11734.1contig

AATAGATTTAATGCAGAGTGTCAACTTCAATTGATTGATAGTGGCTGCCTAGAGTGTGTG
TTGAGTAGGTTTCTGAGGATGCACCTGGCTTGAAGAGAAAGACTGGCAGGATTAACAAT
ATCTAAAATCTCACTTGTAGGAGAAACCACAGGCACCAGAGCTGCCACTGGTGTGGCAC
CAGCTCCACCAAGGCCAGCGAAGAGCCCAAATGTGAGAGTGGCGGTGAGGCTGGCACCAG
CACTGAAGCCACCACTGGTGTGGCACTGGCACTGGCACTGTTATTGGTACTGGTACTGGC
ACCACTGCTGGCACTGCCACTCTCTGGGCTTTGGCTTTAGCTTCTGCTCCCGCTGGATCC
GGGCTTTGGCCAGGGTCCGATATCAGCTTCGTCCAGTTGCAGGGCCCGGCAGCATTCTC
CGAGCCGAGCCCAATGCCCATTCGAGCTTAATCTCGGCCCTAGCCTTGGCTTCAGCTGCA
GCCTCAGCTGCAGCCTTCAAATCCGCTTCATCGCCTCTCGGTAC

11734.2contig

GCCAAGAAAGCCCGAAAGGTGAAGCATCTGGATGGGGAAGAGGATGGCAGCAGTGATCA
GAGTCAGGCTTCTGGAACCAAGGTGGCCGAAGGTCTCAAAGGCCCTAATGGCCTCAAT
GGCCCCGAGGGCTTCAAGGGGTCCCATAGCCTTTTGGGCCCGCAGGGCATCAAGGACTCG
GTTGGCTGCTTGGGCCCGGAGAGCCTTGCTCTCCCTGAGATCACCTAAAGCCCGTAGGGGC
AAGGCTCGCCGTAGAGCTGCCAAGCTCCAGTCATCCCAAGAGCCTGAAGCACCACCCT
CGGGATGTGGCCCTTTTGCAAGGGAGGGCAAATGATTTGGTGAAGTACCTTTTGGCTAAAG
ACCAGACGAAGATTCCCATCAAGCGCTCGGACATGCTGAAGGACATCATCAAAGAATACA
CTGATGTGTACCCCGAAATCATTGAACGAGCAGGCTATTCCTTGGAGAAGGTATTGGGAT
TCAATTGAAGGAAATTGATAAGAATGACCACTTGATACATTCTTCTCAGC

11736.1contig

GAGGTCTCACTATGTTGCCAGGCTGTTCTTGAACCTCTGGGATCAAGCAATCCACCCATG
TTGGTCTCCAAAAGTGCTGGGATCATAGCGTGAGCCACCTACCCAGCCACCAATTTTCA
ATCAGGAAGACTTTTTCTTCTTCAAGAAGTGAAGGGTTCCAGAGTATAGCTACACTATT
GCTTGCCTGAGGGTACTACAAAATTGCTTGCTAAAAGGTTAGGATGGGTAAAGAATTAG
ATTTTCTGAATGCAAAAATAAAATGTGAACCTAATGAACCTTATAGGTAATACATATTCATAAA
ATAATTATTCACATATTTCTGATTTATCACAGAAATAATGTATGAAATGCTTTGAGTTTCT
TGGAGTAAACTCCATTACTCATCCCAAGAAACCATATTATAAGTATCACTGATAATAAGAA
CAACAGGACCTTGTATAAATTCTGGATAAGAGAAATAGTCTCTGGGTGTTTGXTCTTAAT
TGATAAAATTTACTTGTCCATCTTTTAGTTCAGAATCACAAAA

FIG. 1B

11736 2contig

AACCGGAAATGAGAAAGGAGGGGAAAATCATGTGGTATTGAGCGGAAAACTGCTGGATGA
CAGGGCTCAGTCCTGTTGAGAACTCTGGGTGGTGTGTAGAACAGGGCCACTCACAGTG
GGGTGCACAGACCAGCAGGCTCTGTGACCTGTTGTACAGGTCCATGATGAGGTAAAC
AATACACTGAGTATAAGGGTTGGTTTAAAGAACTCTTACAGCAATTTGACAAAGTAATCTC
TGTGCAGTGAATCTAAGAAAAAATTGGGGCTGTATTTGTATGTTCTTTTTTCATTTTCAT
GTTCTGAGTTACCTATTTTTATTGCATTTTACAAAAGCATCCTTCCATGAAGGACCGGAAGT
TAAAAACAAAGCAGGTCTTTATCACAGCACTGTCGTAGAACACAGTTCAGAGTTATCCAC
CCAAGGAGCCAGGGAGCTGGGCTAAACCAAAGAATTTTGCTTTTGGTTAATCATCAGGTA
CTTGAGTTGGAAATGTTTAAATCCCATCATTACCAGGCTGGAXGTG

11739-1&2

CCGCGGCTCCTGTCCAGACCCTGACCCTCCCTCCCAAGGCTCAACCGTCCCCAACAACCG
CCAGCCTTGTAAGCAAGGTTGGACAACCTTTTCCAGAACAGAAAGGAACTCATGCAT
GAGACATTCAAGCAAAGGTTGGACAACCTTTTCCAGAACAGAAAGGAACTCATGCAT
CAGAAAAGGTGACTAATAAAGGTACCAGAAGAATATGGCTGCACAAATACCAGAATCTGA
TCAGATAAAACAGTTAAGGAATTTCTGGGGACCTACAATAAACTTACAGAGACCTGCTTT
TTGGACTGTGTTAGAGACTTCACAACAAGAGAAGTAAACCTGAAGAGACCACCTGTTCA
GAACATTGCTTACAGAAATATTTAAAAATGACACAAAGAATATCCATGAGATTTCAGGAA
TATCATATTACAGCAGAATGAAGCCCTGGCAGCCAAAGCAGGACTCCTTGGCCAACACGA
TAGAGAAGTCCTGATGGATGAACCTTTTGTATGAAAGATTGCCAACAGCTGCTTTATTGGAAA
TGAGGACTCATCTGATAGAATCCCCTGAAAGCAGTAGCCACCATGTTCAACCATCTGTCAT
GACTGTTTGGCAAATGGAACCGCTGGAGAAACAAATGCTATTTACCAGGAATAATCA
CAATAGAAGGTCTTATTGTTCAAGTAAATAAAGATGCAACATTTGTTGAGGCCTTATGA
TTCAGCAGCTTGGTCACTTGATTAGAAAAATAAACCATTTGTTCTTCAATTGTGACTGTTA
ATTTTAAAGCAACTTATGTGTTTCATGATGATGAGATAGAAAAATTTTATTACTCAAAG
TAAATAAATGGA

11740.1.contig

GAAAAAAATATAAACACACTTTTGGCAAAACGGTGGCCCTAAAAGAGGAAAAGAATTT
CACCAATATAAATCCAATTTTATGAAAACCTGACAATTTAATCCAAGAATCACTTTTGTA
TGAAGCTAGCAAGTGATGATATGATAAAATAAACCTGGAGGAAATAAAAACACAAGACTT
GGCATAAGATATATCCACTTTTGATATTAACCTGTGAAGCATATTCTTCGACAAATTTG
AAAGCGTTCCTGATCTTGCTTGTCTCCATTTCAAATAAGGAGGCATATCACATCCCAAGA
GTAAACAGAAAAAGAAAAAGACATTTTGCATTTTGAGATGAACCAAAGACACAAACAA
AACGAACAAAGTGTCATGTCTAATCTAGCCTCTGAAATAAACCTTGAACATCTCTACAA
GGCACCGTGATTTTGTAAATCTAACCTGAAGAAATGTGATGACTTTTGTGGACATGAAAA
TCAGATGAGAAAACCTGTGGTCTTTCCAAAGCCTGAACTCCCTGAAAACCTTTGCA

FIG. 1C

11766.1.contig

CTGGGATCATTCTCTTGATGTCATAAAAGACTCTTCTTCTTCTCTTCATCCTCTTCTTCAT
CCTCTTCTGTACAGTGCTGCCGGGTACAACGGCTATCTTTGTCTTTATCCTGAGATGAAGAT
GATGCTTCTGTTTCTCCTACCATAACTGAAGAAATTCGCTGGAAGTCGTTTACTGGGTGT
TTCTCTGACTTCACCTTCTTTGTCAAACCTGAGTCTTTTTACCTCATGCCCCCTCAGCTTCCAC
AGCATCTTCATCTGGATGTTTATTTTCAAAGGGCTCACTGAGGAACTTCTGATTGAGAG
GTCGAAGAGTCACTGTGATTTTCTCCTCATTTTGTGCAAAATTTGCCTCTTTGCTGTCTGT
GCTCTCAGGCAACCCATTTGTTGTATGGGGGCTGACAAAGAAACCTTTGGTCGATTAAGT
GGCCTGGGTGTCCAGGCCCATTTATATTAGACCTCTCAGTATAGCTTGGTGAATTTCCAG
GAAACATAACACCATTTCATTGATTTAAACTATTGGAATTGGTTTT

11766.2.contig

GAGGGTTGGTGGTAGCGGCTTGGGGAGGTGCTCGCTCTGTGGTCTTGTCTCTCGCACGC
TTCCCCCGGCTCCCTTCGTTTCCCCCCCCCGGTGCGCTGCGTGCCGGAGTGTGTGCGAGGG
AGGGGGAGGGCGTCGGGGGGGTGGGGGGAGGCGTTCGGGTCCCCAAGAGACCCGCGGAG
GGAGGCGGAGGCTGTGAGGGACTCCGGGAAGCCATGGACGTGAGAGGCTCCAGGAGGC
GCTGAAAGATTTTGAGAAGAGGGGGAAAAAGGAAGTTTGTCTGTCTGGATCAGTTTCT
TTGTCATGTAGCCAAGACTGGAGAAACAATGATTGAGTGGTCCCAATTTAAAGGCTATTTT
ATTTTCAAACCTGGAGAAAGTGATGGATGATTTCAGAACTTCAGCTCTGAGCCAAGAGGTC
CTCCAACCCTAATGTCTGA

11773.2.contig

AAGCAGGCGGCTCCCGCGCTCGCAGGGCCGTGCCACCTGCCCGCCCGCCGCTCGCTCGCT
CGCCCGCGCGCGCGCTGCCGACCGCCAGCATGCTGCCGAGAGTGGGCTGCCCGCGCT
GCCGXTGCCG

11775-1&2

ATCTCTTGATGCCAAATATTTAATATAAATCTTTGAAACAAGTTCAGATGAAATAAAAAAT
CAAAGTTTGCAAAAACGTGAAGATTAACCTAATTGTCAAATATTCCTCATTGCCCCAAATC
AGTATTTTTTTTATTTCTATGCAAAAAGTATGCCTTCAAACCTGCTTAAATGATATATGATATG
ATACACAAACCAGTTTTCAAATAGTAAAGCCAGTCATCTTGCAATTGTAAGAAATAGGTA
AAAGATTATAAGACACCTTACACACACACACACACACACGTTGTCACGCCAATGAC
AAAAAACAATTTGGCCTCTCCTAAAATAAGAACATGAAGACCCTTAATTGCTGCCAGGAG
GGAACACTGTGTCACCCCTCCCTACAATCCAGGTAGTTTCTTTAATCCAATAGCAAATCT
GGGCATATTTGAGAGGAGTGATTCTGACAGCCACGTTGAAATCCTGTGGGGAACCATTCAT
GTCCACCCACTGGTGCCCTGAAAAAATGCCAATAATTTTTCGCTCCCACTTCTGCTGCTGTC
TCTTCCACATCCTCACATAGACCCAGACCCGCTGGCCCCCTGGCTGGGCATCGCATTGCTG
GTAGAGCAAGTCATAGGTCTCGTCTTTGACGTACAGAAGCGATACACCAAATTGCCTGGT
CGGTCATTGTCATAACCAGAGA

11777.1&2.cons

CAGACGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACCTCCTGACTTCAGGTGATCTGC
CTGCCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATAAGCCACTGCGCCCGGCTGATCTG
ATGGTTTCATAAGGCTTTTCCCCCTTTTGCACAGCACTTCTCCTCCTGCGGCCATGTGAAG
AAGGACATGTTTGCTTCCCCTTCCACCACGATTGTAAGTTGTTCTGAGGCCCTCCCGGCC
ATGCTGAACTGTGAGTCAATTAACCTCTTTCTTTATAAATTATCCAGTTTGGGTATGTC
TTTATTAGTAGAATGAGAACAGACTAATAACAACCTTAAAGGAGACTGACGGAGAGGATT
CTTCTGGATCCCAGCACTTCTCTGAATGCTACTGACATTCTTCTTGAGGACTTTAAACTG
GGAGATAGAAAACAGATTCCATGGCTCAGCAGCTGAGAGCAGGGAGGGAGCCAAGCTA
TAGATGACATGGGCAGCCTCCCCTGAGGCCAGGTGTGGCCGAACCTGGGCAGTGTGCcAC
CCACCCACCAGGGCCAAGTCTGTCTTGGAGAGCCAAGCCTCAATCACTGCTAGCCTCA
AGTGTCCCAAGCCACAGTGGCTAGGGGGACTCAGGGAACAGTCCCAGTCTGCCCTACTT
CTCTTACCTTTACCCCTCATACCTCCAAAGTAGACCATGTTTCATGAGGTCCAAAGG

11779.2.contig

AAGCGAGGAAGCCACTGCGGCTCCTGGCTGAAAAGCGGCGCCAGGCTCGGGAACAGAGG
GAACGCGAAGAACAGGAGCGGAAGTGCAGGCTGAAAGGGACAAGCGAATGCGAGAGG
AGCAGCTGGCCCGGAGGCTGAAGCCCGGGCTGAACGTGAGGCCGAGGCGCGGAGACGG
GAGGAGCAGGAGGCTCGAGAGAAGCGCAGGCTGAGCAGGAGGAGCAGGAGCGACTGCA
GAAGCAGAAAAGAGGAAGCCGAAGCCCGTCCCGGGAAGAAGCTGAGCGCCAGCGCCAGG
AGCGGGAAAAGCACTTTTCAAGAGGAACAGGAGAGACAAGAGCGAAGAAAGCGGCTG
GAGGAGATAATGAAGAGGACTCGGAAATCAGAAGCCCGCGAAACCAAGAAGCAGGATGC
AAAGGAGACCGCAGCTAACAATTCGGGCCAGACCTTGTGAAAGCTGTAGAGACTCGGC
CCTCTGGGCTTCCAGAAAGGATTCTATTGCAGAAAGGAAGGAGCTXGGCCCCCAXGGA

11781 & 37.cons

CTCTGTGGAAAACCTGATGAGGAATGAATTTACCATACCCATGTTCTCATCCCCAAGCAAA
GTGCTGGGTCTGATTACTGCAACACAGAGAACGAAGAAGAACTTTTCTCATACAGGATC
AGCAGGGCCTCATCACTGGGCTGGATTCTACTCACCACACAGACCGGTTTCTCTC
CAGTGTGACCTACACACTCACTGCTTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
GTTTGTCCCCAAGTTCCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGGATTTTATCCACACAGCAAGGATCCACCTCTGTTCTG
TAGCTGCAGCCACGTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
GTTTGAGTCCAACACCTTCCAAGAACAAACCAATATCAGTGTACTGTAGCCCCCTTAAT
TTAAGCTTTCTAGAAAGCTTTGGAAGTTTTTGTAGATAGTAGAAAGGGGGGCATCACXTGA
GAAAGAGCTGATTTTGTATTTAGGTTTGAAGAAGAAATAACTGAACATATTTTTAGGCAA
GTCAGAAAGAGAACATGGTCACCCAAAAGCACTGTAACCTCAGAAATTAAGTTACTCAGA
AATTAAGTAGCTCAGAAATTAAGAAAGAATGGTATAATGAACCCCCATATACCTTCTCTC
TGGATTCACCAATTGTTAATTTTTTCTCTCAGCTATCCTTCTAATTTCTCTCTAATTTT
AATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTGCAGAAATTTGGAAGCCAT
TTAGAAAATCTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTGGG
GTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAATGATT
TTGTCAGGAATTATTGTTATTTAATAAATATTTTCAGGATATTTTCTCTACAATAAAGTAA
CAAT

FIG. 1E

11781-76-87-37

CTCTGTGGAAAAGTATGAGGAATGAATTTACCATTAACCATGTTCTCATCCCCAAGCAAA
GTGCTGGGTCTGATTACTGCAACACAGAGAACGAAGAAGAACTTTTCTCATACAGGATC
AGCAGGGCCTCATCACACTGGGCTGGATTCTACTACCCACACAGACCGCGTTTCTCTC
CAGTGTGACCTACACACTCACTGCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
GTTTGCTCCCCCAAGTCCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTCGCCAGAAAGGATTTTATCCACACAGCAAGGATCCACCTCTGTTCTG
TAGCTGCAGCCACGTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
GTTTGAGTCCAACACCTTCCAAGAACAACAAAACCATATCAGTGTACTGTAGCCCCCTAAT
TTAAGCTTTCTAGAAAGCTTTGGAAGTTTTGTAGATAGTAGAAAGGGGGGCATCACCTGA
GAAAGAGCTGATTTGTATTTAGGTTTGAAGAAGAAATAACTGAACATATTTTTTAGGCAA
GTCAGAAAAGAGAACATGGTCACCCAAAAGCAACTGTAACCTCAGAAATTAAGTTACTCAGA
AATTAAGTAGCTCAGAAATTAAGAAAGAATGGTATAATGAACCCCATATACCTTCTCTTC
TGGATTCACCAATTGTTAACATTTTTTCTCTCAGCTATCCTTCTAATTTCTCTAATTTCT
AATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTGCAGAAATTTGGAAGCCAT
TTAGAAAATCTTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTGGG
GTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAATGATT
TTGTCAGGAATTATTGTTATTTAATAAATATTTTCTCAGGATATTTTCTCTACAATAAAGTAA
CAATTA

11784-1 & 2

GGACGACAAGGCCATGGCGATATCGGATCCGAATTCAAGCCTTTGGAATTAATAAACCT
GGAACAGGGGAAGGTGAAAGTTGGAGTGAGATGTCTTCCATATCTATACCTTTGTGCACAGT
TGAATGGGAAGTGTGTTGGTTTAGGGCATCTTAGAGTTGATTGATGGAAAAAGCAGACAG
GAACTGGTGGGAGGTCAAGTGGGGAAGTTGGTGAATGTGGAATAACTTACCTTTGTGCTC
CACTTAAACCAGATGTGTTGCAGCTTCTCTGACATGCAAGGATCTACTTTAATTCACACT
CTCATTAATAAATTGAATAAAAGGGAATGTTTGGCACCTGATATAATCTGCCAGGCTATG
TGACAGTAGGAAGGAATGGTTTCCCTAACAAAGCCCAATGCACTGGTCTGACTTTATAAAT
TATTTAATAAAATGAACTATTATC

11785.2.contig

GGCAGTGACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAAGGATTCTCTGTAGTGG
AAGAGAGCACCCAGTGTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAATA
ATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAAC
AAAGGCATACTTTCGGAATCGCCAAGTCAAACTTTCTAAGTTCTGTCTCTCAGAGACA
AGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAACTGGTGTACCCAGAA
AAACAGGAGCAATTAGAAATGGTTCCAATATTTCAAAGCTCCGCAAAACAGGATGTGCTTT
CCTTTGCCCATTTAGGGTTTCTTCTCTTCTCTTTCTTTATTAACCACT

FIG. 1F

11718-1&2 cons

TGCGCTGAAAAACAACGGCCTCCTTTACTGTTAAAATGCAGCCACAGGTGCTTAGCCGTGGG
CATCTCAACCACCAGCCTCTGTGGGGGGCAGGTGGGCGTCCCTGTGGGCCTCTGGGCCCAC
GTCCAGCCTCTGTCTCTGCCTTCCGTTCTTCGACAGTGTCCCGGCATCCCTGGTCACTTG
GTACTTGGCGTGGGCCTCCTGTGCTGCTCCAGCAGCTCCTCCAGGXXGGTCGGCCCGCTTCA
CCGCAGCCTCATGTTGTGTCCGGAGGCTGCTCACGGCCTCCTCCTTCCTCGCGAGGGCTGT
CTTCACCCTCCGGXGCACCTCCTCCAGCTCCAGCTGCTGGCGGGCCTGCAGCGTGGCCAGC
TCGGCCTTGGCCTGCCGCGTCTCCTCCTCARAGGCTGCCAGCCGGTCTCGAACTCCTGGC
GGATCACCTGGGCCAGGTTGCTGCGCTCGCTAGAAAGCTGCTCGTTCACCGCCTGCGCATC
CTCCAGCGCCCGCTCCTTCTGCCGCACAAGGCCCTGCAGACGCAGATTCTCGCCCTCGGCCT
CCCCAAGCTGGCCCTCAGCTCCGAGCACCGCTCCTGAAGCTCCGCTCCGACTGCTCCAG
CTCGGAGAGCTCGGCCTCGTACTTGTCCCGTAAGCGCTTGATGCGGCTCTCGGCAGCCTTC
TCACTCTCCTCCTTGGCCAGCGCCATGTCGGCCTCCAGCCGGTGAATGACCAGCTCAATCT
CCTTGTCCCGGCCTTTCGGATTCTTCCCTCAGCTCCTGTTCCCGGTTCCAGAGCCACGCC
TCCTCCTTCTGGTGGCGCCGGCCTCCACGCCTGCCTCTCCAGCTCCAGCTGCTGCTTCAG
GGTATTCAGCTCCATCTGGCGGGCCTGCAGCGTGGCCA

13690.4

CAACTTATTACTTGAAATTATAATATAGCCTGTCCGTTTGCTGTTTCCAGGCTGTGATATAT
TTTCCTAGTGGTTTGACTTTAAAAATAAATAAGGTTTAATTTCTCCCC

13693.1

TGCAAGTCACGGGAGTTTATTTATTTAATTTTTTCCCCAGATGGAGACTCTGTGCCCCAGG
CTGGAGTGCAATGGTGTGATCTTGGCTCACTGCAACCTCCACCTCCTGGGTTCAGCGATT
CTCCTGCCACAGCCTCCCGAGTAGCTGGGATTACAGGTGCCCGCCACCACACCCAGCTAAT
TTTTATATTTTAGTAAAGACAGGGTTTCCCCATGTTGGCCAGGCTGGTCTTGAACCTCTGA
CCTCAGGTGATCCACCTGCCTCGGCCTCCCAAAGTGTGGGATTACAGGCGTGAGCTACCC
GTGCCTGGCCAGCCACTGGAGTTTAAAGGACAGTCATGTTGGCTCCAGCCTAAGGCGGCA
TTTTCCCCCATCAGAAAGCCCGCGGCTCCTGTACCTCAAAATAGGGCACCTGTAAAGTCAG
TCAGTGAAGTCTCTGCTCTAACTGGCCACCCGGGGCCATTGGCNTCTGACACAGCCTTGCC
AGGANGCCTGCATCTGCAAAAAGAAAGTTCACTTCCTTTCCG

13694.1

CAGAGAATCTKAGAAAGATGTCGCGTTTTCTTTAATGAATGAGAGAAGCCCATTTGTATC
CCTGAATCATTGAGAAAAGGCGGCGGTGGCGACAGCGCGACCTAGGGATCGATCTGGAG
GGACTTGGGGAGCGTGACAGACCTTAGCTCGAGCGCGAGGGACCTCCCGCCGGGATGC
CTGGGGAGCAGATGGACCCTACTGGAAGTCAGTTGGATTGAGTTTCTCTCAGCAAGATAC
TCCTTGCTGATAATTGAAGATTCTCAGCCTGAAAGCCAGGTTCTAGAGGATGATTCTGGT
TCTCACTTCAGTATGCTATCTCGACACCTTCTAATCTCCAGACGCACAAAGAAAATCCTG
TGTTGGATGTTGNGTCCAATCCTTGAACAAACAGCTGGAGAAGAACGAGGAGACCGGTAA
TAGTGGGTTCAATGAACATTTGAAAGAAAACCAGGTTGCAGACCCTG

FIG. 1G

13694.2

GACTGTCCTGAACAAGGGACCTCTGACCAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAG
GAGTGGGAAGCCAAAGAACACCCACCTTCTCCCTTGAAGGAGTAGAGCAACCATCAGAAG
ATACTGTTTTATTGCTCTGGTCAAACAAGTCTTCTGAGTTGACAAAACCTCAGGCTCTGGT
GACTTCTGAATCTGCAGTCCACTTTCCATAAAGTTCTTGTGCAGACAACTGTTCTTTTGCCTC
CATAGCAGCAACAGATGCTTTGGGGCTAAAAGGCATGCTCTGACCTTGCAGGTGGTGG
ATTTTGCTCTTTTACAACATGTACATCCTTACTGGGCTGTGCTGTCACAGGGATGTCCTTGC
TGGACTGTTCTGCTATGGGGATATCTTCGTTGGACTGTTCTTCATGCTTAATTGCAGTATTA
GCATCCACATCAGACAGCCTGGTATAACCAGAGTTGGTGGTTACTGATTGTAGCTGCTCTT
TGTCCACTTCATATGGCACAAGTATTTTCTCAACATCCTGGCTCTGGGAAG

13695.1

GAAATGTATATTTAATCATTCTCTTGAACGATCAGAACTCTRAAATCAGTTTTCTATAACAR
CATGTAATACAGTCACCGTGGCTCCAAGGTCCAGGAAGGCAGTGGTTAACACATGAAGAG
TGTGGGAAGGGGGCTGGAAACAAAGTATTCTTTCTTCAAAGCTTCATTCTCAAGGCCT
CAATTCAAGCAGTCATTGTCCTTGCTTTCAAAAGTCTGTGTGTGCTTCATGGAAGGTATAT
GTTTGTGCTTAATTTGAATTGTGGCCAGGAAGGTCTGGAGATCTAAATTCAGAGTAAG
AAAACCTGAGCTAGAACTCAGGCATTTCTCTTACAGAACTTGGCTTGCAGGGTAGAATGA
ANGGAAAGAACTTAGAAGCTCAACAAGCTGAAGATAATCCCATCAGGCATTTCCCATAG
GCCTTGCAACTCTGTTCACTGAGAGATGTTATCCTG

13695.2

AGTCTGGAGTGAGCAAACAAGAGCAAGAAACAARRAGAAGCCAAAAGCAGAAGGCTCCA
ATATGAACAAGATAAATCTATCTTCAAAGACATATTAGAAGTTGGGAAAAATAATTCATGT
GAACTAGACAAGTGTGTTAAGAGTGATAAGTAAAAATGCACGTGGAGACAAGTGCATCCCC
AGATCTCAGGGACCTCCCCCTGCCTGTACCTGGGGAGTGAGAGGACAGGATAGTGCATG
TTCTTTGTCTCTGAATTTTTAGTTATATGTGCTGTAATGTTGCTCTGAGGAAGCCCCTGGAA
AGTCTATCCCAACATATCCACATCTTATATCCACAAAATTAAGCTGTAGTATGTACCCTAA
GACGCTGCTAATTGACTGCCACTTCGCAACTCAGGGGCGGCTGCATTTTAGTAATGGGTCA
AATGATTCACTTTTATGATGCTTCCCAAGGTGCCTTGGCTTCTCTTCCCAACTGACAAATG
CCCAAGTTGAGAAAAATGATCATAATTTAGCATAAACCGAGCAATCGGCGACCCC

13697.1

TAGCTGTCTTCTCACTCTTATGGCAATGACCCCATATCTTAATGGATTAAGATAATGAAA
GTGTAATTTCTTACACTCTGTATCTATCACCAGAAGCTGAGGTGATAGCCCGCTTGTCATTGT
CATCCATATTCTGGGACTCAGGCGGGAACCTTCTGGAATATTGCCAGGGAGCATGGCAGA
GGGGCACAGTGCATTCTGGGGGAATGCACATTGGCTCAGCCTGGGTAATGAGTGATATAC
ATTACCTCTGTTCACAACTCATTGCCCAGCACCAGTCACAAGGCCCCACCAAATACCAGAG
CCCAAGAAATGTAGTCCTGTTGATATGGTTTTGCTGTGTCCCAACCCAAATCTCATCTTGA
ATTGTAAGCTCCCATAAATCCCATGTGTTGTGGGAGGGACCTGGTG

FIG. 1H

13697.2

ATCATGAGGATGTTACCAAAGGGATGGTACTAAACCATTGTTTCGTCTGTTTTCACACT
GCTITGAAGATACTACCTGAGACTGGGTAAATTTATAAACAAAAGAGATTTAATTGACTCAC
AGTTCTGCATGGCTGAAGAGGCCTCAGGAACTTACAGTCATGGTGGAAGGCAAAGGAGG
AGCAAGGCATGTCTTACATGTCAGTAGGAGAGAGAGCGAGAGCAGGAGAACCTGCCACTT
ATAAACCATTCAGATCTCATAACTCCCTATCATGAGAAAAACATGGAGGAAACCACCCTC
ATGATCCAATCACCTCCCGCCAGGTCCCTCCCTCGACACGTGGGGATTATAATTGAGGATT
AGAGGGACACAGAGACAAACCATATCATCATTGAGAAATCCACCCTCATAGTCCAAT
CAGCTCTACCAGGCCCCACCTCCAACACTGGGGATTGCAATTCAACATGAGATTGGATG
GGGACACAGATTCAAACCATATCATAAC

13699.1&2

CATGGCCTTTCTCCTTAGAGGCCAGAGGTGCTGCCCTGGCTGGGAGTGAAGCTCCAGGCAC
TACCAGCTTTCTGATTTTCCCGTTTGGTCCATGTGAAGAGCTACCACGAGCCCCAGCCTCA
CAGTGTCCACTCAAGGGCAGCTTGGTCTCTTGTCTGCAGAGGCAGGCTGGTGTGACCCT
GGGAACTTGACCCGGGAACAACAGGTGGCCAGAGTGAGTGTGGCCTGGCCCCCTCAACCT
AGTGTCCGTCTCTCTCTCTGGAGCCAGTCTTGAGTTTAAAGGCATTAAGTGTAGATA
CAAGCTCCTTGTGGCTGGAAAAACACCCCTCTGCTGATAAAGCTCAGGGGGCACTGAGGA
AGCAGAGGCCCCCTGGGGGTGCCCTCTGAAGAGAGCGTCAGGCCATCAGCTCTGTCCCTC
TGGTGTCCACGTCTGTCTCTACCCCTCCATCTCTGGGAGCAGCTGCACCTGACTGGCCAC
GCGGGGGCAGTGGAGGCACAGGCTCAGGGTGGCCGGGCTACCTGGCACCTATGGCTTAC
AAAGTAGAGTTGGCCAGTTTCTTCCACCTGAGGGGAGCACTCTGACTCCTAACAGTCTT
CCTTGGCCTGCCATCATCTGGGGTGGCTGGCTGTCAAGAAAGGCCGGGCATGCTTTCTAAA
CACAGCCACAGGAGGCTTGTAGGCGATCTTCCAGGTGGGGAACAGTCTTAGATAAGTAA
GGTGACTTGCCTAAGGCCTCCAGCACCTTGTCTTGGAGTCTCACAGCAGACTGCATGT
SAACAACTGGAACCGAAAACATGCCTCAGTATAAAA

13703.3

CCAGAACCTCCTTCTCTTTGGAGAATGGGGAGGCCTCTTGGAGACACAGAGGGTTTCACCT
TGGATGACCTCTAGAGAAATTGCCCAAGAAGCCACCTTCTGGTCCCAACCTGCAGACCCC
ACAGCAGTCAGTTGGTCAGGCCCTGCTGTAGAAGGTCACTTGGCTCCATTGCCTGCTTCCA
ACCAATGGGCAGGAGAGAAGGCCTTATTCTCGCCACCCATTCTCCTGTACCAGCACCT
CCGTTTTCAGTCAGYGTGTCCAGCAACGGTACCGTTTACACAGTCA

13705.1

TGCATGTAGTTTATTATGTGTTTTSGTCTGGAAAAACCAAGTGTCCAGCAGCATGACTGA
ACATCACTCACTTCCCCTACTTGATCTACAAGGCCAACGCCGAGAGCCCAGACCAGGATTC
CAAACACACTGCACGAGAATATTGTGGATCCGCTGTCAGGTAAGTGTCCGTCAGTACCCCA
RACGCTGTTACGTGGCACATGACTGTACAGTGCCACGTAACAGCACTGTACTTTCTCCCA
TGAACAGTTACCTGCCATGTATCTACATGATTCAGAACATTTTGAACAGTTAATTCTGACA
CTTGAATAATCCCATCAAAAACCGTAAATCACTTTGATGTTTGTAAACGACAACATAGCAT
CACTTTACGACAGAATCATCTGAAAAACAGAACGAATACATACATCTTAAAAAATG
CTGGGGTGGGCCAGGCACAGCTTCACGCCTGTAATCCAGCACTTTGGGAGGCTTAAGCG
GGTG

FIG. 11

13705.2

TGGGGCGGAAAGAAGCCAAGGCCAAGGAGCTGGTGCGGCAGCTGCAGCTGGAGGCCGAG
GAGCAGAGGAAGCAGAAGAAGCGGCAGAGTGTGTGGGCTGCACAGATACCTTCACTTG
CTGGATGGAAATGAAAATTACCCGTGTCTTGTGGATGCAGACGGTGATGIGATTTCCTTCC
CACCATAACCAACAGTGAGAAGACAAAGGTTAAGAAAACGACTTCTGATTTGTTTTGG
AAGTAACAAGTGCCACCAGTCTGCAGATTTGCAAGGATGTCATGGATGCCCTCATTCTGAA
AATGGCAAGAAATGAAAAAGTACACTTTAGAAAATAAAGAGGAAGGATCACTCTCAGAT
ACTGAAGCCGATGCAGTCTCTGGACAACCTCCAGATCCCACAACGAATCCCAGTGCTGGA
AAGGACGGGCCCTTCTTCTGGTGGTGGAACANGTCCCGGTGGTGGATCTTGAANGGAA
CCTGAANGTGGTGTACCCCGTCCAAGGCCGACCTTGGCCAC

13707.4

TCCCGCGCTCGCAGGGCNCGTGCCACCTGCCYGTCCGCGCGCTCGCTCGCTCGCCCGCCG
GCCGCGCTGCCGACCGYCAGCATGCTGCCGAGAGTGGGCTGCCCGCGCTGCCGCTGCCG
CCGCGCGCGCTGCTGCCGCTGCTGCCGCTGCTGCTGCTGC

13708.1&2

GGCGGGTAGGCATGGAACTGAGAAGAACGAAGAAGCTTTCAGACTACGTGGGGAAGAAT
GAAAAAACCAAAATTATCGCCAAGATTGAGCAAAGGGGACAGGGAGCTCCAGCCCGAGA
GCCTATTATTAGCAGTGAGGAGCAGAAGCAGCTGATGCTGTACTATCACAGAAGACAAGA
GGAGCTCAAGAGATTGGAAGAAAATGATGATGATGCCTATTAACTCACCATGGGCGGA
TAACACTGCTTTGAAAAGACATTTTCATGGAGTGAAAGACATAAAGTGGAGACCAAGATG
AAGTTCACCAGCTGATGACACTTCCAAAGAGATTAGCTCACCT

13709.1

TCTGAAGGTAAATGTTTCATCTAAATAGGGATAATGRTAAACACCTATAGCATAGAGTTG
TTTGAGATTAAATGAGATAATACATGTAAAATTATGTGCCTGGCATAACAGCAAGATTGTTG
TTGTTGTTGATGATGATGATGATGATGATAATATTTTCTATCCCCAGTGCACTGCTTG
AACCTATTAGATAATCAATACATGTTTCTTGAAGTGAAGTCAATTTCCCATGTTGTCTGAC
TGATGAAGCCCTACATTTTCTTCTAGAGGAGATGACATTTGAGCAAGATCTTAAAGAAAAT
CAGATGCCCTTACCTGACCACTGCTTGGTGATCCCATGGCACTTTGTACATCTCTCCATTAG
CTCTCATCTCACCAGCCCATCATTATTGTATGTGCTGCCTTCTGAAGCTTGCAGCTGGCTAC
CATCMGGTAGAATAAAAATCATCCTTTTATAAAATAGTGACCCTCCTTTTTATTGCAATTT
CCCAAAGCCAAGCACCGTGGGANGGTAG

FIG. 1J

13709.2

TATGAAGAAGGGAAAAGAAGATAATTTGTGAAAGAAATGGGTCCAGTTACTAGTCTTTGA
AAAGGGTCAGTCTGTAGCTCTTCTTAATGAGAATAGGCAGCTTTCAGTTGCTCAGGGTCAG
ATTTCCCTTAGTGGTGTATCTAATCACAGGAAACATCTGTGGTCCCTCCAGTCTCTTTCTGG
GGGACTTGGGCCCCTTCTCATTTCAATTAATTAGAGGAAATAGAACTCAAAGTACAATTT
ACTGTTGTTTAAACAATGCCACAAAGACATGGTTGGGAGCTATTTCTTGATTTGTGTAAT
GCTGTTTTTGTGTGCTCATAATGGTTCCAAAAATGGGTGCTGGCCAAAGAGAGATACTGT
TACAGAAGCCAGCAAGAAGACCTCTGTTTCATTACACCCCCGGGGATATCAGGAATTGAC
TCCAGTGTGTGCAATCCAGTTTGGCCTATCTTCT

13712.1&2

TGAGGGACTGATTGGTTTGCTCTCTGCTATTCAATTCCCCAAGCCCACTTGTTCCTGCAGCG
TCCTCCTTCTCATTCCTTTAGTTGTACCCTCTCTTTCATCTGAGACCTTTCCTTCTTGATGT
CGCCTTTTCTTCTTCTTGTCTTTTCTGATGTTCTGCTCAGCATGTTCTGGGTGCTTCTCATCT
GCATCATTCCTTTCAGATGCTGTAGCTTCTTCCTCTTCTGCTCTCTTTCTTTTCTTTTCTTTT
TTTTGGGGGGCTTGCTCTCTGACTGCAGTTGAGGGGCCCCAGGGTCTGGCCTTTGAGACG
AGCCAGGAAGGCCTGCTCCTGGGCTCTAGGCGAGCAAGCTTGGCCTTCATTGTGATCCCA
AGACGGGCAGCCTTGTGTGCTGTTGCCCCCTCACAGGCTTGGAGCAGCATCTCATCAGTCA
GAATCTTTGGGGACTTGGACCCCTGGTTGTCGTCATCACTGCAGCTCTCCAAGTCTTTGTTT
GGCTTCTCTCCACCTGAAGTCAATGTAGCCATCTTCACAACTTCTGATACAGCAAGTTGG
GCTTGGGATGATTATAACGGGTGGTCTCCTTAGAAAGGCTCCTTATCTGTACTCCATCCTG
CCCAGTTTCCACTACCAAGTTGGCCGAGTCTTGTGAAGAGCTCATTCCACCAGTGGTTT
GTGAACTCCTTGGCAGGGTCATGCTCCTACCCCATGAGTGTCTTGCTTCAGYGTACCCTGA
GAGCCTGAGTGATACCATTCTCCTTCCG

13714.1&2

GACAACATGAAATAAATCCTAGAGGACAAAATTAACCTCAATAGAGTGTAGTCTAGTTAA
AAACTCGAAAAATGAGCAAGTCTGGTGGGAGTGGAGGAAGGGCTATACTATAAATCCAAG
TGGGCCTCCTGATCTTAACAAGCCATGCTCATTATACACATCTCTGAACTGGACATACCAC
CTTTACGCAGGAAACAGGGCTTGAACCTCTAAGGGAAATTAACATGCACCACCCACATC
TAACCTACCTGCCGGTAGGTACCATCCCTGCTTCGCTGAAATCAGTGCTC

13716.1&2

TTGGAATTAATAAACCTGGAACAGGGAAGGTGAAAGTTGGAGTGAGATGTCTTCCATAT
CTATACCTTTGTGCACAGTTGAATGGGAAGTGTGGGTTTAGGGCATCTTAGAGTTGATT
GATGGAAAAAGCAGACAGGAAGTGGTGGGAGGTCAAGTGGGGAAGTTGGTGAATGTGGA
ATAACTTACCTTTGTGCTCCACTTAAACCAGATGTGTTGCAGCTTTCCTGACATGCAAGGA
TCTACTTTAATCCACACTCTCATTAAATAAATTGAATAAAAGGGAATGTTTTGGCACCTGA
TATAATCTGCCAGGCTATGTGACAGTAGGAAGGAATGGTTTCCCTAACAAGCCCAATGC
ACTGGTCTGACTTTATAAATTATTAATAAAATGAACTATTATC

FIG. 1K

13718.2

AAACTGGACCTGCAACAGGGACATGAATTTACTGCARGGTCTGAGCAAGCTCAGCCCCCTCT
ACCTCAGGGCCCCACAGCCATGACTACCTCCCCAGGAGCGGGAGGGTGAAGGGGGCCTG
TCTCTGCAAGTGGAGCCAGAGTGGAGGAATGAGCTCTGAAGACACAGCACCCAGCCTTCT
CGCACCAGCCAAGCCTTAAGTGCCTGCCTGACCCTGAACCAGAACCCAGCTGAACTGCCCC
TCCAAGGGACAGGAAGGCTGGGGGAGGGAGTTTACAACCCAAGCCATTCCACCCCCTCCC
CTGCTGGGGAGAATGACACATCAAGCTGCTAACAATTGGGGGAAGGGAAGGAAGAAAAA
CTCTGAAAACAAAATCTTGT

13722.3

CATGCGTTTCACCACTGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCC
GCCTCAGCCTCCAAAAGTGTGGGATTACAGATGTGAGCCATGGCACCATGCCAAAAGGC
TATATTCCTGGCTCTGTGTTTCCGAGACTGCTTTTAATCCCACTTCTCTACATTTAGATTA
AAAAATATTTTATTCATGGTCAATCTGGAACATAATTACTGCATCTTAAGTTTCCACTGAT
GTATATAGAAGGCTAAAGGCACAATTTTTATCAATCTAGTAGAGTAACCAACATAAAAA
TCATTAATTACTTTCAACTTAATAACTAATTGACATTCCTCAAAAGAGCTGTTTTCAATCCT
GATAGGTTCTTTATTTTTTCAAAATATATTTGCCATGGGATGCTAATTTGCAATAAGGCGC
ATAATGAGAATACCCCAAAGTGA

13722.4

GTTGGACCCCCAGGGACTGGAAAGACACTTCTTGCCCCAGCTGTGGCGGGAGAAGCTGAT
GTTCTTTTTATTATGCTTCTGGATCCGAATTTGATGAGATGTTTGTGGGTGTGGGAGCCAG
CCGTATCAGAAATCTTTTAGGGAAGCAAAGGCGAATGCTCCTTGTGTTATTTATTGAT
GAATTAGATTCTGTTGGTGGGAAGAGAATTGAATCTCCAATGCATCCATATTCAAGGCAGA
CCATAAATCAACTTCTTGCTGAAATGGATGGTTTTAAACCCAATGAAGGAGTTATCATAAT
AGGAGCCACAACTTCCCAGAGGCATTAGATAATGCCTTAATACCGTCTGGTCGTTTTGA
CATGCAAGTTACAGTTCCAAGGCCAGATGTAAAAGGTGGAACAGAAAATTTGAAATGGTA
TCTCAATAAAATAAAGTTTGATCAATCCCGTTGATCCAGAAATTATAGCCTCGAGGTACTG
GTGGCTTTTCCGGAAGCAGAGTTGGGAGAATCTT

13724-13698-13748

GCCTACAACATCCAGAAAGAGTCTACCCTGCACCTGGTGCTSCGTCTCAGAGGTGGGATGC
AGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACA
CCATYGAGAACGTCAAAGCAAAGATCCARGACAAGGAAGGCRTYCCTCCTGACCAGCAGA
GGTTGATCTTTGCCGGAAGCAGCTGGAAGATGGDCGCACCCTGTCTGACTACAACATCC
AGAAAGAGTCYACCCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGTCARATCTTCGTGA
AGACCCTGACTGGTAAGACCATCACCTCGAGGTGGAGCCCAGTGACACCATCGAGAATG
TCAAGGCAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTG
CTGGGAAACAGCTGGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCA
CTCTGCACTTGGTCCTGCGCTTGAGGGGGGGTGTCTAAGTTTCCCCTTTTAAGGTTTCMAC
AAATTCATTGCACTTTCCTTTCAATAAAGTTGTTGCATTCCC

FIG. 1L

13730.1

GAACTGGGGCCCTGAGCCCAAGTCATGCCTTGTGTCCGCATCTGCCGTGTACCTCTGTGCC
TGCCCCCTACCCCTCCCTCTGGTCTTCTGAGCCAGCACCATCTCCAAATAGCCTATTCCTT
CCTGCAAATCACACACACATGCGGGCCACACATACCTGCTGCCCTGGAGATGGGGAAGTA
GGAGAGATGAATAGAGGGCCATACATTGTACAGAAGGAGGGGCAGGTGCAGATAAAAGC
AGCAGACCCAGCGGCAGCTGAGGTGCATGGAGCACGGTTGGGGCCGGCATTGGGCTGAGC
ACCTGATGGGCCTCATCTCGTGAATCTCGAGGCAGCGCCACAGCAGAGGAGTTAAGTGG
CACCTGGGCCGAGCAGAGCAGGAGACTGAGGGTCAGAGTGGAGGCTAAGCTGCCCTGGA
ACTCTCAATCTTGCTGCCCTAGTATGAAGCCCCCTCTGCCCTACAATTCCTGA

13732.1

ATGGATCTTACTTTGCCACCCAGGTTGGAGTGCAGTGTGCAATCTTGGCTCACTGCAGCC
TTAACCTCCCAGGCTCAAGCTATCCTCCTGCCAAAGCCTTCCACATAGCTGGGACTACAGG
TACACNGCCACCCACCCAGCTAAAAATTTTGTATTTTGTAGAGACGGGATCTCGCCAC
GTTGCCCAGGCTGGTCCCATCCTGACCTCAAGCAGATCTGCCACCTCAGCCCCCAACGT
GCTAGGATTACAGGCGTGAGCCACCGCAGCCCTTTGTTTGTCTTTAATGGAATCACC
AGTTCCCTCCGTGTCTCAGCAGCAGCTGTGAGAAATGCTTTGCATCTGTGACCTTTATGA
AGGGGAACTTCCATGCTGAATGAGGGTAGGATTACATGCTCCTGTTCCCGGGGGTCAAG
AAAGCCTCAGACTCCAGCATGATAAGCAGGGTGAG

13732.2

ATAGGGGCTTTAAGGAGGGAATTCAGGTTCAATGAGGTGTAAGGCCAGGGCTCTTATCC
AGTAAGACTGGGGTCCTTAGATGAGAAAGAGACACCCGAGGTCCTTCTCTGCCGTGTG
AGGATGCATCAAGAAGGCGGCCGTCTGCAAGCGAAGGAGAGGCCGACCAGAAACCGAC
ACCTTCATCTTGGACTTGCAGCCTCTAGAACTGAGAAAATAACTGTCTGTTGGTTAAGCCA
CCCAGTTTGTAGTATTCTTATGGCTTCCTAAGCAGACTAACAAACAAACACCCAAAATT
AACTGATGGCTTCGCTGTCTTCTGTAAAAATGCTATGAGAGAACTTTCACTCACTGTTT
GCAGTTTCTCCCTCAGTCCCTGGTTCTTCTCTCACATAATCCCAATTTCAATTTATAGTTC
ATGGCCCAGGCAGAGTCATTCATCAGGCATCTCCTGAGCTAAACCAGCACCTGCTCTGCT
CACTTCTTGAAGTGGCTGCTCATCAGCCCTCTTGAGAGATTTCATTTCTCCCGTGCCA
GGTACTTCACGCACCAAGCTCA

FIG. 1M

[illegible]

13738.1

TTTGACTTTAGTAGGGGTCTGAACTATTTATTTTACTTTGCCMGTAATATTTARACCYTATA
TATCTTTCATTATGCCATCTTATCTTCTAATGBCAAGGGAACAGWTGCTAAMCTGGCTTCT
GCATTWATCACATTA.AAAATGGCTTTCTTGAAAAATCTTCTTGATATGAATAAAGGATCTT
TTAVAGCCATCATTTAAAGCMGGNTTCTCTCCAACACGAGTCTGCTASGGGGGGKAGCT
GTGAACTCTGGCTGAAGGCTTTCCCATACACACTGCAATGACMTGGTTTCTGACCAGBG TG
AGTTA

13738.2

AGAGAAGCCCCATAAATGCAATCAGTGTGGGAAGGCCTTCAGTCAGAGCTCAAGCCTTTT
CCTCCATCATCGGGTTCATACTGGAGAGAAACCCTATGTATGTAATGAATGCGGCAGAGCC
TTTGGTTTTAACTCTCATCTTACTGAACACGTAAGGATTCACACAGGAGAAAAACCCTATG
TTTGAATGAGTGCGGCAAAGCCTTTCGTCGGAGTTCCACTCTTGTTTCAGCATCGAAGAGT
TCACACTGGGGAGAAGCCCTACCAGTGCCTTGAATGTGGGAAAGCTTTCAGCCAGAGCTC
CCAGCTCACCTACATCAGCCGAGTTCACACTGGAGAGAAGCCCTATGACTGTGGTGACTG
TGGGAAGGCCTTCAGCCGGAGGTCAACCCTCATTACAGCATCAGAAAGTTCACAGCGGAGA
GACTCGTAAGTGCAGAAAAACATGGTCCAGCCTTTGTTTCATGGCTCCAGCCTCACAGCAGAT
GGACAGATTCCCACTGGAGAGAAGCACGGCAGAACCTTTAACCATGGTGCAAATCTCATT
CTGCGCTGGACAGTTC

13739.1&2

GAGACAGGGTCTCACTTTGTCACCCAGGCTGGAATGCAGTGGTGCGATCTTACGTAGCTCA
CTGCAGCCCTGACCTCCTGGACTCAAACAATTCTCCTGCCTCAGCCCTGCAAGTAGCTGGG
ACTGTGGGTGCATGCCACCATGCCTGGCTAACTTTTGTAGTTTTGTAAAGATGGGGTTTT
GCCATGTTGCACATGCTGGTCTTGAACCTCTGAGCTCAAACGATCTGCCCCACCTCGGCCTC
CCAGAATGTTGGGATTACAGGGGTAAACCACCACGCTGGCCCCATTAGGGTATTCTTAGC
ATCCACTTGCTCACTGAGATTAATCATAAGAGATGATAAGCACTGGAAGAAAAAATTTT
ACTAGGCTTTGGATAATTTTTTTCCTTTTTCAGCTTTATACAGAGGATTGGATCTTTAGTTTC
CTTTAACTGATAATAAAACATTGAAAGGAAATAAGTTTACCTGAGATTACAGAGATAAC
CGGCATCACTCCCTTGCTCAATTCCAGTCTTTACCACATCAATTATTTTCAGAGGTGCAGGA
TAAAGGCCTTATGCTGCTTTTCGCACTTTTCTTCCACTTTTTGTAAACCTGTGCGCTGACA
AATGGAATTGACAGCGTATGCCATGACTATTCATTTGTCAGGCATACGCTGTCAATTTTT
CCACCAATCCCTTGTCTCTTTGGAGAGATCTTCTTATCAGCTAGTCTTTGGCAAAAGTA
ATTGCAACTTCTTCTAGGTATTCTATTGTCCGTTCCACTGGTGGAACCCCTGGGACCAGGA
CTAAACCTCCAG

13741.1

ATCTCATATATATATTTCTTCTGACTTTATTTGCTTGCTTCTGNACGCATTTAAAAATATC
ACAGAGACCAAAATAGAGCGGCTTTCTGGTGGAACGCATGGCAGTCACAGGACAAAATAC
AAAAGTAGGGGGCTCTGTCTTCTATACATCATACAATTTTCAAGTATTTTTTTATGTACA
AAGAGCTACTCTATCTGAAAAAAATTAATAAATAAATGAGACAAGATAGTTTATGCATC
CTAGGAAGAAAGAAATGGGAAGAAAGAACGGGGCAGTTGGGTACAGATTCTGTCCCTGT
TCCCAGGGACCACTACCTTCTGCCACTGAGTTCCCCACAGCCTCACCCATCATGTCACA
GGGCAAGTGCCAGGGTAGGTGGGGACCAGTGGAGACAGGAACCAGCAACATACTTTGGC
CTGGAAGATAAGGAGAAAGTCTCAGAAACACACTGGTGGGAAGCAATCCACNGGCCGT
GCCCCANGAGCTTCCACCTGCTGCTGGCTCCCTGGGTGGCTTTGGGAACAGCTTGGGCAG
GCCCTTTGGGTGGGNCCAACCTGGGCCTTTGGGCCGTGTGGAAG

FIG. 10

13742.1

AAACATTGAGATGGAATGATAGGGTTTCCAGAATCAGGTCCATATTTTAACTAAATGAA
AATTATGATTTATAGCCTTCTCAAATACCTGCCATACTTGATATCTCAACCAGAGCTAATTT
TACCCTTTTACAAATTAAATAAGCAAGTAACCTGGATCCACAATTTATAATACCTGTCAATT
TTTTCTGTATTAAACCTCTATCATAGTTTAAGCCTATTAAGGGTACTTAATCCTTACAAATAA
ACAGGTTTAAATCACCTCAATAGGCAACTGCCCTTCTGGTTTTCTTCTTTGACTAAACAAT
CTGAATGCTTAAGATTTTCCACTTTGGGTGCTAGCAGTACACAGTGTTACACTCTGTATTCC
AGACTTCTTAAATTATAGAAAAAGGAATGTACACTTTTGTATTCTTTCTGAGCAGGGCCG
GGAGGCAACATCATCTACCATGGTAGGGACTTGTATGCATGGACTACTTTA

14351.1

ACTCTGTCGCCCAGGCTGGAGCCABTGGMGGCATCTCGACTCCCTGCAAGCTMCGCCTC
ACAGGWTGATGCCATTCTCCTGCCTCAGCATCTGGAGTAGCTGGGACTACAGGCGCCAGC
CACCATGCCCAGCTAATTTTT

14351.2

ACCTTAAAGACATAGGAGAATTTATACTGGGAGAGAAAGCTTACAAATGTAAGGTTTCTG
ACAAGACTTGGGAGTGATTCACACCTGGAACAACATACTGGACTTCACACTGGABAGAAA
CCTTACAAGTGTAATGAGTGTGGCAAAGCCTTTGGCAAGCAGTCAACACTTATTCACCATC
AGGCAATTCA

14354.2

AGTCAGGATCATGATGGCTCAGTTTCCACAGCGATGAATGGAGGGCCAAATATGTGGGC
TATTACATCTGAAGAACGTACTAAGCATGATAAACAGTTTGATAACCTCAAACCTTCAGGA
GGTTACATAACAGGTGATCAAGCCCGTACTTTTTCTACAGTCAGGTCTGCCGGCCCCGG
TTTTAGCTGAAATATGGGCCTATCAGATCTGAACAAGGATGGGAAGATGGACCAGCAAG
AGTTCTCTATAGCTATGAACTCATCAAGTTAAAGTTGCAGGGCCAACAGCTGCCTGTAGT
CCTCCCTCCTATCATGAAACAACCCCTATGTTCTCTCCACTAATCTCTGCTCGTTTGGGA
TGGAAGCATGCCCAATCTGTCCATTATCAGCCATTGCCTCCAGTTGCACCTATAGCAAC
ACCCTTGTCTTCTGCTACTTCAGGGACCAGTATTCCTCCCTAATGATGCCTGCT

14354.1

CTTTCGATTTCTTCAATTTGTACGTTTGATTTTATGAAGTTGTTCAAGGGCTAACTGCTG
TGATTATAGCTTTCTCTGAGTTCTTCAGCTGATTGTTAAATGAATCCATTTCTGAGAGCT
TAGATGCAGTTTCTTTTCAAGAGCATCTAATTGTTCTTTAAGTCTTTGGCATAATTCTTCC
TTTTCTGATGACTTTCTATGAAGTAACTGATCCCTGAATCAGGTGTGTTACTGAGCTGCAT
GTTTTAATTCTTTGTTAATAGCTGCTTCTCAGGGACCAGATAGATAAGCTTATTTTGAT
ATTCCTTAAGCTCTTGGTGAAGTTGTTGATTTCATAATTTCCAGGTCACACTGGTTATCC
CAAACCTCT

FIG. 1P

16431.1.2

GTGGAGGTGAAACGGAGGCAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGC
GTGAGGCACCTAGGCCGCGGCACCCCGGCACAGGAAGCCGTCTGAACCGGGCTACCGG
GTAGGGGAAGGGCCCGCTAGTCCTCGCAGGGCCCCAGAGCTGGAGTCGGCTCCACAGCC
CCGGGCCGTCGGCTTCTCACTTCTGGAACCTCCCGGGCGCCCGGGCTGAGGACTGGCTCG
GCGGAGGGAGAAGAGGAAACAGACTTGAGCAGCTCCCGTTGTCTCGAACTCCACTGCC
GAGGAACTCTCATTCTTCCCTCGCTCCTTACCCCCACCTCATGTAGAAAGGTGCTGAA
GCGTCCGGAGGGAAGAAGAACCTGGGCTACCGTCCTGGCCTTCCCMCCCCCTTCCCGGG
CGCTTTGGTGGGCGTGGAGTTGGGGTGGGGGGTGGGTGGGGTTCTTTTTGGAGTGCT
GGGGAACTTTTTCCCTTCTTCAGGTCAGGGGAAAGGGAATGCCCAATTCAGAGAGACAT
GGGGCAAGAAGGACGGGAGTGGAGGAGCTTCTGAACTTTGCAGCCGTCATCGGGAGG
CGGCAGCTCTAACAGCAGAGAGCGTCACCGCTTGGTATCGAAGCACAAGCGGCATAAGTC
CAAACACTCCAAAGACATGGGGTTGGTGACCCCCGAAGCAGCATCCCTGGGCACAGTTAT
CAAACCTTTGGTGGAGTATGATGATATCAGCTCTGATTCCGACACCTTCTCCGATGACATG
GCCTTCAAACCTAGACCGAAGGGAGAACGACGAACGTCGTGGATCAGATCGGAGCGACCGC
CTGCACAAACATCGTCACCACCAGCACAGGCGTCCCGGACTTACTAAAAGCTAAACAG
ACCG

16432-1

GACATGTTTGCCTGCAGGGGACCAGAGACAATGGGATTAGCCAGTGCTCACTGTTCTTTAT
GCTTCCAGAGAGGATGGGGACAGCTCTCAGGTCAGAATCCAGGCTGAGAAGGCCATGCTG
GTTGGGGGCCCCCGGAAGCACGGTCCGGATCCTCCCTGGCATCAGCGTAGACCCGCTGCTC
AGGCTTGGGGTACCAAACCTCATGCTCTGTACTGTTTGGCCCCATGCGGTGAGAGGAAAAC
CTAGAAAAAGATTGGTCTGTAAAGGAATCAGCTGCCCCCTCATCTCCGATCCAATGCT
GGTGACAACATATTCCCTCTCCAGGACACAGACTCGGTGACTCCCACTGGGCTGAGTGG
CCTCTGGAGGCTCGTGGCCTAAGGCAGGGCTCCGTAAGGCTGATCGGCTGAACTGGGTGG
GGTGAGGGTTTCTGACCCTTCGCTTCCCATCCATAACCGCTGTCAATGAGCTCACACTGT
GGTCA

16432-2

GATGGCATGGTCTGTTGCTAATGTGCCTGCTGGGATGGAGCACTTCCTCCTGTGAGCCCAGG
GGACCCGCTGTCCCTGGAGCTTGGGGCAAGGAGGGAAGAGTGATACCAGGAAGGTGGG
GCTGCAGCCAGGGGCCAGAGTCAGTTACAGGAGTGGTCTCGGCCCTCAAAGCTCCTCCG
GGGACTGCTCAGGAGTGATGGTGCCTGGAGTTTGGCCCAACTTCCCTGGCCACCCTGGAA
GGTGCCTGGCTGCTCCAGGCCTTAGGCTGGGCTGATGGGTTTCTCCAGGACACAAGTATC
ATTAAAGCCACCCTCTCCTCAGCTTGTCAGGCCGACATGTGGGACAGGCTGTGCTCACA
CCCCCTCGCCTGCCCTGCCCTCCATCAGGAGGAGCCAGTGGAACTTTCGGAAAGCTCCAG
CATCTCAGCAGCCCTCAAAGTCGTCTGGGGCAAGCTCTGGTTCTCCTGACTGGAGGTCA
TCTGGGCTTGGCCTGCTCTCTCTCGC

17184.3

TAAAAAAGTGTAACAAAGGTTTATTTAGACTTTCTTCATGCCCCAGATCCAGGATGTCTA
TGTAACCGTTATCTTACAAAGAAAGCACAAATTTGGTATAAACTAAGTCAGTGACTTGC
TTAACTGAAATAGCGTCCATCCAAAAGTGGGTTTAAAGTAAACTACCTGACGATATTGGC
GGGGATCCTGCAGTTTGGACTGCTTGCCGGGTTTGTCCAGGGTTCGGGTCTGTTCTTGGC
ACTCATGGGGACAGGCATCCTGCTCGTCTGTGGGGCCCCGCTGGAGCCCTTACGTGAAGCT
GAAGGTATCGACCSTAGGGGGCTCTAGGGCAGTGGGACCTTCATCCGGAACATAACAAGG
TCGGGGAGAGGCCTCTTGGGCTATGTGGG

FIG. 1Q

17184.4

CAAGCGTTCCTTTATGGATGTAAATTCAAACAGTCATGCTGAGCCATCCCGGGCTGACAGT
CACGTTWAAGACACTAGGTGCGGGCGCCACAGTGCCACCCAAGGAGAAGAAGAATTTGGA
ATTTTCCATGAAGATGTACGGAAATCTGATGTTGAATATGAAAATGGCCCCAAATGGAA
TTCCAAAAGGTTACCACAGGGGCTGTAAGACCTAGTGACCCTCCTAAGTGGGAAAGAGGA
ATGGAGAATAGTATTTCTGATGCATCAAGAACATCAGAATATAAACTGAGATCATAATG
AAGGAAAATTCCATATCCAATATGAGTTTACTCAGAGACAGTAGAAACTATTCCCAGG

17185.1

TAGGAATAACAAATGTTTATTCAGAAATGGATAAGTAATACATAATCACCCCTCATCTCTT
AATGCCCCCTTCTCTCTTCTGCACAGGAGACACAGATGGGTAAACATAGAGGCATGGGAA
GTGGAGGAGGACACAGGACTAGCCACCACCTTCTCTTCCCGGTCTCCCAAGATGACTGCT
TATAGAGTGGAGGAGGCAAAACAGGTCCCCTCAATGTACCAGATGGTCACCTATAGCACCA
GCTCCAGATGGCCACGTGGTTGCAGCTGGACTCAATGAACTCTGTGACAACCAGAAGAT
ACCTGCTTTGGGATGAGAGGGAGGATAAAGCCATGCAGGGAGGATATTTACCATCCCTAC
CCTAAGCACAGTGCAAGCAGTGAGCCCCCGGTCCCAGTACCTGAAAAACCAAGGCCTAC
TGNCTTTTGGATGCTCTCTTGGGCCACG

17188.2

AAGCCTCCTGCCCTGGAAATCTGGAGCCCCCTTGGAGCTGAGCTGGACGGGGCAGGGAGGG
GCTGAGAGGCAAGACCGTCTCCCTCCTGCTGCAGCTGCTTCCCCAGCAGCCACTGCTGGGC
ACAGCAGAAACGCCAGCAGAGAAAATGGGAGCCGAGAGTCCTTAGCCCTGGAGCTGAGG
CTGCCTCTGGGCTGACCCGCTGGCTGTACGTGGCCAGAAGTGGGGTTGGCATCTGGCATCC
ATTTGAGGCCAGGGTGGAGGAAAGGGAGGCCAACAGAGGAAAACCTATTCCTGCTGTGAC
AACACAGCCCTTGTCCCACGCAGCCTAAGTGCAGGGAGCGTGATGAAGTCAGGCAGCCAG
TCGGGGAGGACGAGGTAACCTCAGCAGCAATGTACCTTGTAGCCTATGCGCTCAATGGCC
CGGAGGGGCAGCAACCCCCCGCACACGTAGCCAACAGCAGTGCCTCTGCAGGCACCAAG
AGAGCGATGATGGACTTGAGCGCCGTGTTT

17190.1

GTTTGGCAGAAGACATGTTTAATAACATTTTCATATTTAAAAAATACAGCAACAATTCTCT
ATCTGTCCACCATCTTGCCCTTGCCTTCCCTGCGGGCTGAGGCAGACAAAGGAAAGGTAATGA
GGTTAGGGCCCCCAGGCGGGCTAAGTGCTATTGGCCTGCTCCTGCTCAAAGAGAGCCATA
GCCAGCTGGGCACGGCCCCCTAGCCCCCTCAGGTTGCTGAGGCGGCAGCGGTGGTAGAGT
TCTTCACTGAGCCGTGGGCTGCAGTCTCGCAGGGAGAACTTCTGCACCAGCCCTGGCTCTA
CGGCCCCGAAAGAGGTGGAGCCCTGAGAACCGGAGGAAAACATCCATCACCTCCAGCCCCT
CCAGGGCTTCTCCTCTTCCCTGGCCTGCCAGTTCACCTGCCAGCCGGGCTCGGGCCGCCAG
GTAGTCAGCGTTGTAGAAGCAGCCCTCCGCAGAAGCCTGCCGGTCAAATCTCCCCGCTATA
GGAGCCCCCGGGAGGGGTCAGCACC

FIG. 1R

17190.2

CAAGTTGAACGTCAGGCTTGGCAGAGGTGGAGTGTAGATGAAAACAAAGGTGTGATTATG
AAGAGGATGTGAGTCCTTTGGGTGTAGGAGAGAAAGGCTGTTGAGCTTCTATTTCAAGAT
ACTTTTACCTGTGCAAAAAGCACATTTTCCACCTCCTTCTCATGGCATTGTGTGAAGGTGAG
TATGATTCTATTCCATCTGCATTTTAGAGGTGAAGAATAACGTACAAGGGATTTCAGTGAT
TAGCAAGGGACCCCTCACTAAGTGTGATGGAGTTAGGACAGAGCTCAGCTGTTTGAATCT
CAGAGCCCAGGCAGCTGGAGCTGGGTAGGATCCTGGAGCTGGCACTAATGTGAGGTGCAT
TCCCTCCAACCCAGGCTCAGATCCGGAACCTGACCGTGCTGACCCCCGAAGGGGAGGCAG
GGCTGAGCTGGCCCGTTGGGCTCCCTGCTCTTTACACCACACTCTCGCTTTGAGGTGCTG
GGCTGGGACTACTTCACAGAGCAGC

17191.2&89.2

TGGCCTGGGCAGGATTGGGAGAGAGGTAGCTACCCGGATGCAGTCCTTTGGGATGAAGAC
TATAGGGTATGACCCCATCATTTCCCCAGAGGTCTCGGCCTCCTTTGGTGTTCAGCAGCTG
CCCCTGGAGGAGATCTGGCCTCTCTGTGATTTCACTGTGCACACTCCTCTCCTGCCCTC
CACGACAGGCTTGCTGAATGACAACACCTTTGCCAGTGCAAGAAGGGGGTGCCTGTGGT
GAACTGTGCCCCGTGGAGGGATCGTGGACGAAGGCGCCCTGCTCCGGGGCCTGCAGTCTGG
CCAGTGTGCCGGGGCTGCACTGGACGTGTTTACGGAAGAGCCGCCACGGGACCGGGCCTT
GGTGGACCATGAGAATGTCACTCAGCTGTCCCCACCTGGGTGCCAGCACCAGGAGGCTCA
GAGCCGCTGTGGGGAGGAAATTGCTGTTCACTTCGTGGACATGGTGAAGGGGAAATCTCT
CACGGGGGTTGTGAATGCCCAGGCCCTT

FIG. 1S

[illegible]

FIG. 2A

ATGGCAGTGACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAGGATTCTCTGTAGTG
GAAGAGAGCACCCAGTGTTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAAT
AATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAA
CAAAGGCATACTTTCGGAATCGCCAAGTCAAACTTTCTAACTTCTGTCTCTCTCAGAGAC
AAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAAGTGGTGTTACCCAGA
AAACAGGAGCAATTAGAAATGGTTCCAATATTTCAAAGCTCCGCAACAGGATGTGCTT
TCCTTGCCCATTTAGGGTTTCTCTCTTCTTCTTTCTTTATTAACCACTA

ATGGCAGTGACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAGGATTCTCTGTAGTG
GAAGAGAGCACCCAGTGTTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAAT
AATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAA
CAAAGGCATACTTTCGGAATCGCCAAGTCAAACTTTCTAACTTCTGTCTCTCTCAGAGAC
AAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAAGTGGTGTTACCCAGA
AAACAGGAGCAATTAGAAATGGTTCCAATATTTCAAAGCTCCGCAACAGGATGTGCTT
TCCTTGCCCATTTAGGGTTTCTCTCTTCTTCTTTCTTTATTAACCACTA

FIG. 2B

ATATCTAGAAGTCTGGAGTGAGCAAAACAAGAGCAAGAAACAAAAAGAAGCCAAAAGCAG
 AAGGCTCCAATATGAACAAGATAAATCTATCTTCAAAGACATATTAGAAGTTGGGAAAAT
 AATTCATGTGAAGTAGACAAGTGTGTTAAGAGTGATAAGTAAATGCACGTGGAGACAAG
 TGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTGAGAGGACAGGAT
 AGTGCATGTTCTTTGTCTCTGAATTTTAAAGTTATATGTGCTGTAATGTTGCTCTGAGGAAGC
 CCCTGGAAAAGTCTATCCCAACATATCCACATCTTATATCCACAAATTAAGCTGTAGTATG
 TACCCTAAGACGCTGCTAATTGACTGCCACTTCGCAACTCAGGGGCGGCTGCATTTTAGTA
 ATGGGTCAAATGATTCACCTTTTATGATGCTTCCAAAGGTGCCTTGGCTTCTCTTCCCAACT
 GACAAATGCCAAAGTTGAGAAAAATGATCATAATTTAGCATAAACAGAGCAGTCGGCGA
 CACCGATTTTATAAATAAACTGAGCACCTTCTTTTAAACAAACAAATGCGGGTTTATTTCT
 CAGATGATGTTTCATCCGTGAATGGTCCAGGGAAGGACCTTTCACCTTGACTATATGGCATT
 ATGTCATCACAAGCTCTGAGGCTTCTCCTTTCCATCCTGCGTGGACAGCTAAGACCTCAGT
 TTTCAATAGCATCTAGAGCAGTGGGACTCAGCTGGGGTGATTTCGCCCCCATCTCCGGGG
 GAATGTCTGAAGACAATTTTGTACCTCAATGAGGGAGTGGAGGAGGATACAGTGCTACT
 ACCAACTAGTGGATAAAGGCCAGGGATGCTGCTCAACCTCCTACCATGTACAGGACGTCTC
 CCCATTACAACACCCAATCCGAAGTGTCAACTGTGTCAAGGACTAAGAAACCCTGGTTTTG
 AGTAGAAAAGGGCCTGGAAAGAGGGGAGCCAACAAATCTGTCTGCTTCTCTCACATTAGTC
 ATTGGCAAATAAGCATTCTGTCTCTTTGGCTGCTGCCTCAGCACAGAGAGCCAGAACTCTA
 TCGGGCACCAGGATAACATCTCTCAGTGAACAGAGTTGACAAGGCCTATGGGAAATGCCT
 GATGGGATTATCTTCAGCTTGTGAGCTTCTAAGTTTCTTTCCCTTCATTCTACCCTGCAAG
 CCAAGTTCTGTAAGAGAAATGCCTGAGTTCTAGCTCAGGTTTCTTACTCTGAATTTAGATC
 TCCAGACCCTTCTGGCCACAATTCAAATTAAGGCAACAAACATATACCTTCCATGAAGCA
 CACACAGACTTTTGAAGCAAGGACAATGACTGCTTGAATTGAGGCCTTGAGGAATGAAG
 CTTTGAAGGAAAAGAATACTTTGTTTCCAGCCCCCTCCACACTCTTCATGTGTTAACAC
 TGCCTTCTGGACCTTGGAGCCACGGTGACTGTATTACATGTTGTTATAGAAAAGTATTTT
 AGAGTTCTGATCGTTCAAGAGAATGATTAAATATACATTTCTTA

FIG. 2C

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAG
TGTCAGCTCTCTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCCTGACCCAAAAGCCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCGGGCGGCCGCTCGA

100
90
80
70
60
50
40
30
20
10
0
100
90
80
70
60
50
40
30
20
10
0

FIG. 6

TTGGGGNTTTMGAGCGGCCGCCGGGCAGGTACCGGGTGGTCAGCGAGGAGCCATTAC
ACTGAACCTCACCATCAACAACCTGCGGTATGAGGAGAATGCAGCACCCTGCTCCAG
GAAGTTCAACACCACGGAGAGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAGAGCAC
CAGTGTGGGCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACTTGAGAAAATGGG
GCAGCCACTGGAGTGACGCCATCTGCCCTCCGCTTGATCCCACTGGTCTCTGGACTGG
ACAGAGAGCGGCTATACTGGGAGCTGAGCCAGTCTCTGGCGGNGACNCCNCTT

AGCGTGGTCGCGGCCGAGGTCAGTCGCAGCATGCTCTTTCTCCTGCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTCACTGAGAAGGCTGTCATCCACTGAGATGGCAGTCAAAAGTGC
ATTTAATACACCTAACGTATCGAACATCATAGCTTGGCCCAAGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCTGCAGACCTGCCCGGGCGGCCGCTCGA

λ	μ	ν	ρ	σ	τ	θ	ϕ	ψ	χ	η	ξ	ζ	δ	γ	β	α
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
29	29	29	29													

FIG. 7A and 7B

TGTGGTGTGAACTTCCTGGAGNCAGGGTGACCCATGTCCTCCCCATACTGCAGGTTGGTG
ATGGTGAAGTTGAGGGTGAATGGTACCAGGAGAGGGCCAGCAGCCATAATTGTSGRGCKG
SMGMSSGAGGMWGGWGTYYCWGAGGTTTCYRARRTCCACTGTGGAGGTCCCAGGAGTGCT
GGTGGTGGGCACAGAGSTCYGATGGGTGAAACCATTGACATAGAGACTGTTCTGTCCAG
GGTGTAGGGGGCCAGCTCTTYRATGYCATTGGYCACTTKGCTYAGCTCCCAGTACAGCCRC
TCTCKGYYGMGWCCAGSGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCACTCCA
GTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTCAGTCTGCAGCCAGAGTACAGAGGG
CCAACACTGGTGTCTTTGAATA

1000
900
800
700
600
500
400
300
200
100
0

FIG. 8

TCGAGCGGCGCCCGGGCAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGA
TTCCACCTGTGCTGCGGACATCTCCAGGGAGTGCAGAAGGGAAGCAGGTCAAACCTGCTCA
GATCAGTCAGACTGGCTGTTCTCAGTTCTCACCTGAGCAAGGTCAGTCTGCAGCCAGAGTA
CAGAGGGCCAACACTGGTGTCTTGAACAAGGGCTTGAGCAGACCCTGCAGAACCTCTTC
CGTGGTGTGAACTTCCTGGAACCAAGGGTCTTGCATGTTTTTCCTCATAATGCAAGGTTG
GTGATGG

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1180
1181
1182
1183
1184
1185
1186
1187
1188
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1260
1261
1262
1263
1264
1265
1266
1267
1268
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288
1289
1290
1291
1292
1293
1294
1295
1296
1297
1298
1299
1300
1301
1302
1303
1304
1305
1306
1307
1308
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1330
1331
1332
1333
1334
1335
1336
1337
1338
1339
1340
1341
1342
1343
1344
1345
1346
1347
1348
1349
1350
1351
1352
1353
1354
1355
1356
1357
1358
1359
1360
1361
1362
1363
1364
1365
1366
1367
1368
1369
1370
1371
1372
1373
1374
1375
1376
1377
1378
1379
1380
1381
1382
1383
1384
1385
1386
1387
1388
1389
1390
1391
1392
1393
1394
1395
1396
1397
1398
1399
1400
1401
1402
1403
1404
1405
1406
1407
1408
1409
1410
1411
1412
1413
1414
1415
1416
1417
1418
1419
1420
1421
1422
1423
1424
1425
1426
1427
1428
1429
1430
1431
1432
1433
1434
1435
1436
1437
1438
1439
1440
1441
1442
1443
1444
1445
1446
1447
1448
1449
1450
1451
1452
1453
1454
1455
1456
1457
1458
1459
1460
1461
1462
1463
1464
1465
1466
1467
1468
1469
1470
1471
1472
1473
1474
1475
1476
1477
1478
1479
1480
1481
1482
1483
1484
1485
1486
1487
1488
1489
1490
1491
1492
1493
1494
1495
1496
1497
1498
1499
1500
1501
1502
1503
1504
1505
1506
1507
1508
1509
1510
1511
1512
1513
1514
1515
1516
1517
1518
1519
1520
1521
1522
1523
1524
1525
1526
1527
1528
1529
1530
1531
1532
1533
1534
1535
1536
1537
1538
1539
1540
1541
1542
1543
1544
1545
1546
1547
1548
1549
1550
1551
1552
1553
1554
1555
1556
1557
1558
1559
1560
1561
1562
1563
1564
1565
1566
1567
1568
1569
1570
1571
1572
1573
1574
1575
1576
1577
1578
1579
1580
1581
1582
1583
1584
1585
1586
1587
1588
1589
1590
1591
1592
1593
1594
1595
1596
1597
1598
1599
1600
1601
1602
1603
1604
1605
1606
1607
1608
1609
1610
1611
1612
1613
1614
1615
1616
1617
1618
1619
1620
1621
1622
1623
1624
1625
1626
1627
1628
1629
1630
1631
1632
1633
1634
1635
1636
1637
1638
1639
1640
1641
1642
1643
1644
1645
1646
1647
1648
1649
1650
1651
1652
1653
1654
1655
1656
1657
1658
1659
1660
1661
1662
1663
1664
1665
1666
1667
1668
1669
1670
1671
1672
1673
1674
1675
1676
1677
1678
1679
1680
1681
1682
1683
1684
1685
1686
1687
1688
1689
1690
1691
1692
1693
1694
1695
1696
1697
1698
1699
1700
1701
1702
1703
1704
1705
1706
1707
1708
1709
1710
1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
1727
1728
1729
1730
1731
1732
1733
1734
1735
1736
1737
1738
1739
1740
1741
1742
1743
1744
1745
1746
1747
1748
1749
1750
1751
1752
1753
1754
1755
1756
1757
1758
1759
1760
1761
1762
1763
1764
1765
1766
1767
1768
1769
1770
1771
1772
1773
1774
1775
1776
1777
1778
1779
1780
1781
1782
1783
1784
1785
1786
1787
1788
1789
1790
1791
1792
1793
1794
1795
1796
1797
1798
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848
1849
1850
1851
1852
1853
1854
1855
1856
1857
1858
1859
1860
1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
2051
2052
2053
2054
2055
2056
2057
2058
2059
2060
2061
2062
2063
2064
2065
2066
2067
2068
2069
2070
2071
2072
2073
2074
2075
2076
2077
2078
2079
2080
2081
2082
2083
2084
2085
2086
2087
2088
2089
2090
2091
2092
2093
2094
2095
2096
2097
2098
2099
2100
2101
2102
2103
2104
2105
2106
2107
2108
2109
2110
2111
2112
2113
2114
2115
2116
2117
2118
2119
2120
2121
2122
2123
2124
2125
2126
2127
2128
2129
2130
2131
2132
2133
2134
2135
2136
2137
2138
2139
2140
2141
2142
2143
2144
2145
2146
2147
2148
2149
2150
2151
2152
2153
2154
2155
2156
2157
2158
2159
2160
2161
2162
2163
2164
2165
2166
2167
2168
2169
2170
2171
2172
2173
2174
2175
2176
2177
2178
2179
2180
2181
2182
2183
2184
2185
2186
2187
2188
2189
2190
2191
2192
2193
2194
2195
2196
2197
2198
2199
2200
2201
2202
2203
2204
2205
2206
2207
2208
2209
22

FIG. 10

Gene Name	Bal Probe '1		P1	P2	Probe 2 Name	GEN ID	Probe1		Probe2		A1	
	Exp Name	Probe Name					Probe1 Value	Probe2 Value	Probe1 S/B	Probe2 S/B		
42100188 (D3)	17.0 205A Ovary T	205A Ovary T	17.0 205A Ovary T	17.0 205A Ovary T	205A Ovary T	42200606	8620	1240	57.7	65	2.2	65
42100188 (D3)	17.9 273 Ovary Tumor	273 Ovary Tumor	17.9 273 Ovary Tumor	17.9 273 Ovary Tumor	273 Ovary Tumor	42240628	5894	1002	35.3	89	3.9	89
42100188 (D3)	18.2 085A Ovary T	085A Ovary T	18.2 085A Ovary T	18.2 085A Ovary T	085A Ovary T	42250607	12151	2121	54.3	71	2.8	71
42100188 (D3)	18.4 426A Ovary T (met)	426A Ovary T (met)	18.4 426A Ovary T (met)	18.4 426A Ovary T (met)	426A Ovary T	42250611	7487	1480	54.0	73	9.7	73
42100188 (D3)	18.5 261A Ovary Tumor	261A Ovary Tumor	18.5 261A Ovary Tumor	18.5 261A Ovary Tumor	261A Ovary Tumor	42240621	7302	2116	39.2	84	4.5	84
42100188 (D3)	18.8 081A Ovary T (met)	081A Ovary T (met)	18.8 081A Ovary T (met)	18.8 081A Ovary T (met)	081A Ovary T	42200609	3714	1111	20.4	84	2.6	84
42100188 (D3)	19.0 911A Ovary T (met)	911A Ovary T (met)	19.0 911A Ovary T (met)	19.0 911A Ovary T (met)	911A Ovary T	42240601	2435	814	12.1	75	2.1	75
42100188 (D3)	19.2 081A Ovary T (met)	081A Ovary T (met)	19.2 081A Ovary T (met)	19.2 081A Ovary T (met)	081A Ovary T	42240608	4578	1754	25.0	69	2.1	69
42100188 (D3)	19.2 261A Ovary Tumor	261A Ovary Tumor	19.2 261A Ovary Tumor	19.2 261A Ovary Tumor	261A Ovary Tumor	42260629	7004	3506	48.5	81	5.6	81
42100188 (D3)	19.6 086A Ovary T	086A Ovary T	19.6 086A Ovary T	19.6 086A Ovary T	086A Ovary T	42200605	2191	1081	14.0	90	2.9	90
42100188 (D3)	19.8 511A Ovary T (met)	511A Ovary T (met)	19.8 511A Ovary T (met)	19.8 511A Ovary T (met)	511A Ovary T	42240603	1979	971	10.4	80	2.7	80
42100188 (D3)	19.8 085A Ovary Tumor	085A Ovary Tumor	19.8 085A Ovary Tumor	19.8 085A Ovary Tumor	085A Ovary Tumor	42240624	6911	964	13.9	91	1.4	91
42100188 (D3)	19.8 135A Ovary Tumor	135A Ovary Tumor	19.8 135A Ovary Tumor	19.8 135A Ovary Tumor	135A Ovary Tumor	42240626	1666	317	9.8	100	1.0	100
42100188 (D3)	19.8 408A Ovary Tumor	408A Ovary Tumor	19.8 408A Ovary Tumor	19.8 408A Ovary Tumor	408A Ovary Tumor	42240642	1827	3480	14.4	97	9.5	97
42100188 (D3)	19.8 261A Ovary Tumor	261A Ovary Tumor	19.8 261A Ovary Tumor	19.8 261A Ovary Tumor	261A Ovary Tumor	42200621	5914	3651	30.4	106	6.0	106
42100188 (D3)	19.8 261A Ovary Tumor	261A Ovary Tumor	19.8 261A Ovary Tumor	19.8 261A Ovary Tumor	261A Ovary Tumor	42240604	2019	1274	11.9	50	2.6	50
42100188 (D3)	19.8 261A Ovary T	261A Ovary T	19.8 261A Ovary T	19.8 261A Ovary T	261A Ovary T	42200627	1736	1072	11.0	92	1.0	92
42100188 (D3)	19.8 511A Ovary Tumor	511A Ovary Tumor	19.8 511A Ovary Tumor	19.8 511A Ovary Tumor	511A Ovary Tumor	42240602	4201	3074	24.0	91	7.7	91
42100188 (D3)	19.8 911A Ovary T (met)	911A Ovary T (met)	19.8 911A Ovary T (met)	19.8 911A Ovary T (met)	911A Ovary T (met)	42240622	4602	2101	16.6	89	4.0	89
42100188 (D3)	19.8 261A Ovary Tumor	261A Ovary Tumor	19.8 261A Ovary Tumor	19.8 261A Ovary Tumor	261A Ovary Tumor	42240619	1643	1297	9.6	90	1.1	90
42100188 (D3)	19.8 511A Ovary Tumor	511A Ovary Tumor	19.8 511A Ovary Tumor	19.8 511A Ovary Tumor	511A Ovary Tumor	42240614	2521	2084	22.0	65	23.9	65
42100188 (D3)	19.8 261A Ovary T (met)	261A Ovary T (met)	19.8 261A Ovary T (met)	19.8 261A Ovary T (met)	261A Ovary T (met)	42240610	2072	1663	10.9	88	2.3	88
42100188 (D3)	19.8 261A Ovary T	261A Ovary T	19.8 261A Ovary T	19.8 261A Ovary T	261A Ovary T	42240625	1840	1473	10.7	87	3.8	87
42100188 (D3)	19.8 261A Ovary Tumor	261A Ovary Tumor	19.8 261A Ovary Tumor	19.8 261A Ovary Tumor	261A Ovary Tumor	42240620	1329	1204	9.1	90	3.5	90

FIG. 10

40

Figure 13 shows the results of the analysis of the data from the experiment described in Figure 12. The data are presented in the form of a table, with the first column showing the Gene Name, the second column showing the Bal Probe 1, the third column showing the P1, the fourth column showing the P2 Name, the fifth column showing the Probe 2, the sixth column showing the GEM ID, the seventh column showing the Probe1 Value, the eighth column showing the Probe2 Value, the ninth column showing the S/B, the tenth column showing the A%, and the eleventh column showing the Probe2 A%.

Gene Name	Bal Probe 1	P1	P2 Name	Probe 2	GEM ID	Probe1 Value	Probe2 Value	S/B	A%	Probe2 A%
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	8072	243	55.2	67	67
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	7067	557	42.6	69	69
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	2850	227	21.7	64	64
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	11711	1469	54.0	58	58
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	6949	952	37.8	69	69
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	208	1210	2.1	41	41
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	8676	1747	52.3	57	57
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	1149	707	17.4	57	57
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	6112	1443	29.1	77	77
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	7612	1809	38.1	79	79
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	408	1508	3.4	60	60
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	2500	860	12.3	51	51
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	1424	269	6.7	61	61
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	1742	723	11.6	70	70
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	1083	1342	12.0	62	62
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	1470	742	8.0	67	67
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	107	580	2.6	51	51
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	2097	1202	11.2	66	66
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	173	470	2.9	47	47
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	969	1094	5.6	72	72
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	750	672	5.6	62	62
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	498	446	4.2	73	73
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	3117	3374	16.7	91	91
421V0089 (001)	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	13.2 426A Ovary Tumor	426A Ovary Tumor	426A Ovary Tumor	224	409	2.3	48	48

FIG. 13

53

11721-1

ACGGTTTCAATGGACACTTTTATTGTTTACTTAATGGATCATCAATTTTGTCTCACTACCTA
CAAATGGAATTTTCATCTTGTTTCCATGCTGAGTAGTGAAACAGTGACAAAGCTAATCATAA
TAACCTACATCAAAAGAGAACTAAGCTAACACTGCTCACTTTCTTTTAAACAGGCAAATA
TAAATATATGCACTCTAXAATGCACAATGGTTAGTCACTAAAAAATTCAAATGGGATCTT
GAAGAATGTATGCAAATCCAGGGTGCAAGTGAAGATGAGCTGAGATGCTGTGCAACTGTTT
AAGGGTTCCTGGCACTGCATCTCTTGGCCACTAGCTGAATCTTGACATGGAAGGTTTTAGC
TAATGCCAAGTGGAGATGCAGAAAAATGCTAAGTTGACTTAGGGGCTGTGCACAGGAACTA
AAAGGCAGGAAAGTACTAAATATTGCTGAGAGCATCCACCCAGGAAGGACTTTACCTTC
CAGGAGCTCCAACTGGCACCACCCCAAGTGCTCACATGGCTGACTTTATCCTCCGTGTTT
CATTTGGCACAGCAAGTGGCAGTG

11721-2

AAGGCTGGTGGGTTTTTGATCCTGCTGGAGAACCTCCGCTTTCATGTGGAGGAAGAAGGG
AAGGGAAAAGATGCTTCTGGGAACAAGGTTAAAGCCGAGCCAGCCAAAATAGAAGCTTTC
CGAGCTTCACTTTCCAAGCTAGGGGATGTCTATGTCAATGATGCTTTTGGCACTGCTCACA
GAGCCACAGCTCCATGGTAGGAGTCAATCTGCCACAGAAGGCTGGTGGGTTTTTGATGA
AGAAGGAGCTGAACACTTTTGCAAAGGCCTTGGAGAGCCAGAGCGACCTTCCTGGCCA
TCCTGGGCGGAGCTAAAGTTGCAGACAAGATCCAGCTCATCAATAATATGCTGGACAAAG
TCAATGAGATGATTATTGGTGGTGGGAATGGCTTTTACCTTCCTTAAGGTGCTCAACAACAT
GGAGATTGGCACTTCTCTGTTTGATGAAGAGGGAGCCAAGATTGTCAAAGACCTAATGTCC
AAAGCTGAGAAGAATGGTGTGAAGATTACCTTGCCTGTTGACTTTGTCACTGCTGACAAGT
TTGATGA

11724-1

TTTGTTCCCTTACATTTTTCTAAAGAGTTACTTAAATCAGTCAACTGGTCTTTGAGACTCTTA
AGTTCTGATTCCAACCTAGCTAATTCATTCTGAGAACTGTGGTATAGGTGGCGTGTCTCTTC
TAGCTGGGACAAAAGTTCTTTGTTTTCCCTGTAGAGTATCACAGACCTTCTGCTGAAGC
TGGACCTCTGTCTGGGCCTTGGACTCCCAAATCTGCTTGTCAATGTTCAAGCCTGGAAATGTT
AATCTTTAATTCTTCCATATGGATGGACATCTGTCTAAGTTGATCCTTTAGAACACTGCAAT
TATCTTCTTTGAGTCTAATTTCTTCTTTGCTTTGAATCGCATCACTAAACTTCCTCTCCC
ATTTCTTAGCTTCATCTATCACCTGTACGATCATCTGGAGGGAAGACATGCTCTTAGTA
AAGGCTGCAAGCTGGGTACAGTACTGTCCAAGTTTCTGAAGTTGCTGAACTTCCTGT
CTTTCTTGTCAAAGTAACCTGAATCTCTCAATTGTCTTCCAAGTGGACTTTTCTCTGC
GCAAAGCATCCAG

11724-2

TCATTGCCTGTGATGGCATCTGGAATGTGATGAGCAGCCAGGAAGTTGTAGATTTTATTCA
ATCAAAGGATTTCAGCATGTGGTGGAGCTGTGAGGCAAGAGAAACAAGAACTGTATGGCA
AGTTAAGAAGCACAGAGGCAAAACAAGAAGGAGACAGAAAAGCAGTTGCAGGAAGCTGAG
CAAGAAATGGAGGAAATGAAAGAAAAGATGAGAAAGTTTGCTAAATCTAAACAGCAGAA
AATCCTAGAGCTGGAAGAAGAGAATGACCGGCTTAGGGCAGAGGTGCACCCTGCAGGAG
ATACAGCTAAAGAGTGTATGGAAACACTTCTTTCTTCCAATGCCAGCATGAAGGAAGAAC
TTGAAAGGGTCAAAATGGAGTATGAAACCCTTTCTAAGAAGTTTCAGTCTTTAATGTCTGA
GAAAGACTCTTAAGTGAAGAGGTTCAAGATTTAAAGCATCAGATAGAAGGTAATGTATC
TAAACAAGCTAACCTAGAGGCCACCGAGAAACATGATAACCAAACGAATGTCACTGAAGA
GGGAACACAGTCTATACCAGGT

FIG. 15A

AAGCCAATAATCACCATTATTACTTAATATATGCCAACCACTGTACTTGGCAGTTCAACA
ATTCTCACCGTTACAACAACCCCATGAGGTATTTATCCCATCTATAGATAGGGAAACCA
CAGCTCAAGTAAGTTAGGAAACIGAGCCAAGTATACACAGAATACGAAGTGGCAAAACT
GAAGGAAAGACTGACACTGCTATCTGCTGGCCTCCAGTGCTCTGGCTCTTTTCAACGGG
CAATGTCTCCAGCGCTGCTGCTGCTGCTGCATTACCATGCCCTCATTGTTTTCTTCTCTG
GTGTTCAACTGCATCCTTCAAAGAATCTAACTCATCCAGAGACCACTTATTTCTTCTCTC
TTTCTGAAATTACTTTTAATAATTCTTCATGAGGGGGAAAGAAGATGCCTGTTGGTAGTT
TTGTTGTTAAAGCTGCTCAATTTGGGACTTAAACAATTGTTTTCATCTGTACATCCTGTA
ACAGCTGTGTTTGTGAGAAAGTCACTCTCCCTCTCTTTAGCATGGCTCTTAACCTCTTC
AATTCATTTTCTTTTCTTCAACACAATCTCAAGTCTTCAAACTGTGATGCAGAAGAGGC
CTCTTTCAAGTATTGTTGTGCTACTTCTGAACATGTGCTTTTAAAGATTCATTTTCTTCTG
AAGATCCTGTAACCACTTCCCTGTATTGGCTAGGTCTTTCTCTTTCTCTTCCAAAAACGCCT
TCATGGTATTCATCTGTTCTCTTTCTTTTAAATAAGTTCAGGAGCTTCAGAAC

CAAGCTTTTTTTTTTTTTTAAAAAGTGTTAGCATTAAATGTTTTATTGTCACGCAGATGGCA
ACTGGGTTTATGTCTTCATATTTTATATTTTGTAAAAATAAAAAAATTACAAGTTTAAATA
GCCAATGGCTGGTTATATTTTCAGAAAAATGATTAGACTAATTCATTAATGGTGGCTTCA
AGCTTTTCCTTATTGGCTCCAGAAAAATCACCCACCTTTTGTCCCTCTTAAAAAACTGGAA
TGTTGGCATGCATTTGACTTCACACTCTGAAGCAACATCCTGACAGTCATCCACATCTACTT
CAAGGAATATCACGTTGGAATACTTTTCAGAGAGGGAATGAAAGAAAGGCTTGATCATTT
TGCAAGGCCACACCACGTGGCTGAGAAGTCAACTACTACAAGTTTATCACTGCAGCGTC
CAAGGCTTCTGAAAAGCAGTCTTGCTCTCGATCTGCTTACCATCTTGGCTGCTGGAGTCT
GACGAGCGGCTGTAAGGACCGATGGAAATGGATCCAAAGCACCAAACAGAGCTTCAAGA
CTCGCTGCTTGGCTTGAATTCGGATCCGATATCGCCATGGCCT

AAGTGTTAGCATTAAATGTTTATTGTACGCGAGATGGCAACTGGGTTTATGCTTTCATATTT
TATATTTTTGTAAATTAAAAAAATTMCAAGTTTTAAATAGCCAATGGCTGGTTATATTTTC
AGAAAAACATGATTAGACTAATTCATTAATGGTGGCTTCAAGCTTTTCTTATTGGCTCCAG
AAAATTCACCCACCTTTTGTCCCTTCTTAAAAAACTGGAATGTTGGCATGCATTTGACTTCA
CACTCTGAAGCAACATCCTGACAGTCATCCACATCTACTTCAAGGAATATCACGTTGGAAT
ACTTTTCAGAGAGGGAATGAAAGAAAGGCTTGATCATTTTGC AAGGCCACACACAGTGG
CTGAGAAGTCAACTACTACAAGTTTATCACCTGCAGCGTCCAAGGCTTCTGAAAAGCAGT
CTTGCTCTCGATCTGCTTCACCATCTTGGCTGCTGGAGTCTGACGAGCGGCTGTAAGGACC
GATGGAAAATGGATCCAAAGCACCAACAGAGCTTCAAGACTCGCTGCTTGGCATGAATTC
GGATCCGA

FIG. 15B

11728.1.40.19.19

TACAAACTTTATTGAAACGCACACGCGCACACACACAAACACCCCTGTGGATAGGGAAAA
GCACCTGGCCACAGGGTCCACTGAAACGGGGAGGGGATGGCAGCTTGTAAATGTGGCTTTT
GCCACAACCCCTTCTGACAGGGAAGGCCTTAGATTGAGGCCCCACCTCCCATGGTGATGG
GGAGCTCAGAATGGGGTCCAGGGAGAATTTGGTTAGGGGGAGGTCCTAGGGAGGCATGA
GCAGAGGGCACCTCCGAGTGGGGTCCGAGGGCTGCAGAGTCTTCAGTACTGTCCCTCAC
AGCAGCTGTCTCAAGGCTGGGTCCCTCAAAGGGGCGTCCAGCGGGGGCCTCCCTGCGC
AAACACTTGGTACCCCTGGCTGCGCAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGATCA
GCACAACAGACGCCCTGGCGGTAGGGACAGCAGGCCACGCCCTGTGGTTGTCTCGGCAG
CAGGTCTGGTTATCATGGCAGAAGTGCTTCCCACTTCACGTCTTCACACCCACGTG
AXGGCTACXGGCCAGGAAG

11728.2.40.19.19

CCCGTGGGTGCCATCCACGGAGTTGTACCTGATCTTTGGAAGCAGGATCGCCCGTCTGCA
CTGCAGTGAAGCCCCGTGGGCAGCAGTGATGGCCATCCCCGCATGCCACGGCCTCTGGG
AAGGGGCAGCAACTGGAAGTCCCTGAGACGGTAAAGATGCAGGAGTGGCCGGCAGAGCA
GTGGGCATCAACCTGGCAGGGGCCACCCAGATGCCTGCTCAGTGTGTGGGCCATTTGTCC
AGAAGGGGACGGCAGCAGCTGTAGCTGGCTCCTCCGGGGTCCAGGCAGCAGGCCACAGGG
CAGAACTGACCATCTGGGCACCGGCTTCCAGCCACCAGCCCTGCTGTAAAGGCCACCCAGC
TCACCAGGGTCCACATGGTCTGCGTCCGACTCCGCGGTCTTGGGCCCTGATGGTTC
TACCTGCTGTAGCTGCCAGTGGGAAGTATGGCTGCTGCCAATGCCCAACGCCACCTGCT
GCTCCGATCACCTGCACTGCTGCCCCAAGACACTGTGTGTGACCTGATCCAGAGTAAGTGC
CTCTCCAAGGAGAACG

11730-1

GAATCACCTTTCTGGTTTAGCTAGTACTTTGTACAGAACAATGAGGTTTCCACAGCGGAG
TCTCCCTGGGCTCTGTTTGGCTCTCGGTAAGGCAGGCCTACACCTTTCTCTCCTCTATGG
AGAGGGGAATATGCATTAAAGGTGAAAAGTCACCTTCCAAAAGTGAGAAAAGGGATTGATT
GCTGCTTCAGGACTGTGGAATTATTTGGAATGTTTTACAAATGGTTGCTACAAAACAACAA
AAAAGGTAATTACAAAATGTGTACATCACACATGCTTTTTAAAGACATTATGCATTGTGC
TCACATTCCCTTAAATGTTGTTTCCAAAGGTGCTCAGCCTCTAGCCCAGCTGGATTCTCCG
GAAGAGGCAGAGACAGTTTGGCGAAAAAGACACAGGGAAGGAGGGGGTGGTGAAAGGA
GAAAGCAGCCTTCCAGTTAAAGATCAGCCCTCAGTTAAAGGTCAGCTTCCCGCAXGCTGGC
CTCAXGCGGAGTCTGGGTGAGAGGGAGGAGCAGCAGCAGGGTGGGACTGGGGCGT

11730-2

AACCGGAGCGGAGCAGTAGCTGGGTGGGCACCATGGCTGGGATCACCACCATCGAGGCG
GTGAAGCGCAAGATCCAGGTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAGCTGA
GCGCCTCCAGCGAGAAGTTGAGGGAGAAAGGCGGGCCCGGAACAGGCTGAGGCTGAGG
TGGCCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGACCGTGTGAGGAGC
GCCTGGCCACTGCCCTGCAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGA
GAGGTATGAAGGTTATTGAAAACCGGGCCTTAAAAAGATGAAGAAAAGATGGAACTCCAG
GAAATCCAACCTCAAGAAGCTAAGCACATTGCAGAAGAGGCAGATAGGAAGTATGAAGA
GGTGGCTCGTAAGTTGGTGATCATTGAAGGAGACTTGAACGCACAGAGGAACGAGCTGA
GCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGGACCAGAACCT
GAAGTGTCTGAGTGC

FIG. 15C

11732.1contig

GAGAACTTGGCCTTTATTGTGGGCCAGGAGGGCACAAAGGTCAGGAGGCCCAAGGGAGG
GATCTGTTTTCTGGATAGCCAGGTCATAGCATGGGTATCAGTAGGAATCCGCTGTAGCTG
CACAGGCCTCACTTGCTGCAAGTTCCGGGAGAACACCTGCACTGCATGGCGTTGATGACCT
CGTGGTACACGACAGAGCCATTGGTGCAGTGCAAGGGCACGUGCATGGGCTCCGTCTCG
AGGGCAGGCAGCAGGAGCATTGCTCCTGCACATCCTCGATGTCAATGGAGTACACAGCTT
TGCTGGCACACTTTCCCTGGCAGTAATGAATGTCCAATTCTCTTGGGACTTACAATCTCCC
ACTTTGATGTACTGCACCTTGGTGTGATGTCTTTGCAATCAGGCTCCTCACATGTGTACA
GCAGGTGCCTGGAATTTACGATTTTGCCTCCTTCAGCCAGACACTTGTGTTTCATCAAATG
GTGGGCAGCCCGTGACCTCTTCTCCAGATGTACTCTCTCT

11732.2contig

GCCTGGACCTTGCCGGATCAGTGCCACACAGTGAAGTGGTGGCAATGGCCAGACCTTGC
TGCAGAGTCATCGTGTCAATTGTGACCATGGACCCGGCCTTCATGTGCCAACAGCCAGTC
TCCTGTTCCGGTGGAGGAGACGTGTGGCTGCCGCTGGACCTGCCCTTGTGTGTGCACGGGC
AGTTCCACTCGGCACATCGTCACCTTCGATGGGCAGAAATTTCAAGCTTACTGGTAGCTGCT
CCTATGTCATCTTTAAAACAAGGAGCAGGACCTGGAAAGTGTCTCCACAATGGGGCCTG
CAGCCCCGGGGCAAAACAAGCCTGCATGAAGTCCATTGAGATTAAGCATGCTGGCGTCTC
TGCTGAGCTGCACAGTAACATGGAGATGGCAGTGGATGGGAGACTGGTCTTGGCCCGTA
CGTTGGTGAAAACATGGAAGTCAGCATCTACGGCGCTATCATGTATGAAGTCAGGTTTACC
CATCTTGGCCACATCCTCACATACACCGCCXCAAAACAACGAGTT

11735-1-2

AGATCAACCTCTGCTGGTCAGGAGGAATGCCTTCCTTGTCTTGGATCTTTGCTTTGACGTTT
TCGATAGTRWCAaCTKKRYTSRAMSKMAAGKGYRATGRWMTTKSYWGWASYKTMWWM
RSGRARA YTTaGaCAYCCCMCCTCWgAGaCGSAGKACCARGTGCAgAgGTGGACTCTTTCTG
GATGTTGTAGTCAGACAGGGTGGCTCCATCTTCCAGCTGTTTCCAGCAAAGATCAACCTC
TGCTGATCAGGAGGGATGCCCTTCTTATCTTGGATCTTTGCCTTGACATTCTCGATGGTGT
ACTGGGCTCCACCTCGAGGGTGTGGTCTTACCAGTCAGGGTCTTACGAAGATYTGATC
CCACCTCTGAGACGGAGCACCAGGTGCAGGGTGTACTCTTCTGGATGTTGTAGTCAGACA
GGGTGCGYCCATCTTCCAGCTGcTTTCCSaGCAAAGATCAACCTCTGCTGGTCAGGAGGRAT
GCCTTCCTTGTCTYTGATCTTTGCTTGTACRTTCTCRATGGTGTCACTCGGCTCCACTTCGA
GAGTGATGGTCTTACCAGTCAGGGTCTTACGAAGATCTGCATCCACCTCTAA

11740.2.contig

AAGTCACAAACAGACAAAGATTATTACCAGCTGCAAGCTATATTAGAAGCTGAACGAAGA
GACAGAGGTCATGATTCTGAGATGATTGGAGACCTTCAAGCTCGAATTACATCTTTACAAG
AGGAGGTGAAGCATCTCAAACATAATCTCGAAAAAGTGAAGGAGAAAGAAAAGAGGCT
CAAGACATGCTTAATCACTCAGAAAAGGAAAAGAATAATTTAGAGATAGATTTAACTAC
AAACTTAAATCATTACAACAACGGTTAGAACAAGAGGTAAATGAACACAAAGTAACCAAA
GCTCGTTAACTGACAAACATCAATCTATTGAAGAGGCAAAGTCTGTGGCAATGTGTGAG
ATGGAAAAAAGCTGAAAGAAGAAAGAGAAGCTCGAGAGAAGGCTGAAAATCGGGTTGT
TCAGATTGAGAAACAGTGTTCATGCTAGACGTTGATCTGAAGCAATCTCAGCAGAACT
AGAACATTTGACTGGAATAAAGAAAGGATGGAGGATGAAGTTAAGAAATCTA

FIG. 15D

11765.2&64.2.contig

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAGTCCTACAAGGTGTCCACCTCTGGCCCC
 CGGGCCTTCAGCAGCCGCTCCTACACGAGTGGGCCCCGGTTCCCGCATCAGCTCCTCGAGCT
 TCTCCCGAGTGGGCAGCAGCAACTTTCGCGGTGGCCTGGGCGGCGGCTATGGTGGGGCCA
 GCGGCATGGGAGGCATCACCGCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCTT
 GGAGGTGGACCCCAACATCCAGGCCGTGCGCACCCAGGAGAAGGAGCAGATCAAGACCTT
 CAACAACAAGTTTGCTCCTTCATAGACAAGGTACGGTTCCTGGAGCAGCAGAACAAAGAT
 GCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGACGGCTCGAAGCAACATGGACA
 ACATGTTTCGAGAGCTACATCAACARCCTTAGGCGGCAGCTGGAGACTCTGGGCCAGGAGA
 AGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGGGGCTGGTGGAGGACTTCAAGAAC
 AAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTCTCATCAAG
 AAGGATGTGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCTCGCTGGAAGGGCTG
 ACCGACGAGATCAACTTCTCAGGCAGCTGTATGAAGAGGAGATCCGGGAGCTGCAGTCC
 CAGATCTCGGACACATCTGTGGTGTGTCCATGGACAACAGCCGCTCCCTGGACATGGACA
 GCATCATTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCGCAGCCGGGCTGAGG
 CTGAGAGCATGTACCAGGTCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGG
 ATGACCTGCGGCGCACAAAGACTGAGATCTCTGAGATGAACCCGGAACATCAGCCCGGCT
 XCAGGCTGAGATTGAGGGCCTCAAAGGCCAGAXGGCTTXCCTGGAXGXCCGCCAT

11767.2.contig

CCCGGAGCCAGCCAACGAGCGGAAAAATGGCAGACAATTTTTGCTCCATGATGCGTTATCT
 GGGTCTGGAAACCCAAACCTCAAGGATGGCCTGGCGCATGGGGGAACCAAGCCTGCTGGG
 GCAGGGGGCTACCCAGGGGCTTCTATCCTGGGGCTACCCCGGGCAGGCACCCCAAGG
 GCTTATCCTGGACAGGCACCTCCAGGCGCTACCTGGAGCACCTGGAGCTTATCCCGGAG
 CACCTGCACCTGGAGTCTACCCAGGGCCACCCAGCGGCCCTGGGGCCTACCATCTTCTGG
 ACAGCCAAGTGCCACCGAGCCTACCTGCCACTGGCCCCCTATGGCGCCCTGCTGGGCCA
 CTGATTGTGCCTTATAACCTGCCTTTGCTGGGGGAGTGGTGCCTCGCATGCTGATAACAA
 TTCTGGGCACGGTGAAGCCCAATGCAACAGAATTGCTTTAGATTTCCAAAGAGGGAATG
 ATGTTGCCTTCCACTTTAACCCACGCTTCAATGAGAACAACAGGAGAGTCATTGGTTGCAA
 TACAAAGCTGGATAA

11768-1&2

GGGAATGCAACAACCTTTATTGAAAGGAAAGTGCAATGAAATTTGTTGAAACCTTAAAAGG
 GGAAACTTAGACACCCCCCTCRAgCGMAGKACCARGTGCARAgGTGGACTCTTCTGGAT
 GTTGTAGTCAGACAGGGTRCGWCCATCTTCCAGCTGTTTYCCRGCAAAGATCAACCTCTGC
 TGATCAGGAGGRATGCCTTCCTTATCTTGGATCTTTGCCTTGACATTCTCGATGGTGTCACT
 GGGCTCCACCTCGAGGTGATGGTCTTACCAGTCAGGGTCTTCACGAAGATYTGATCCCA
 CCTCTGAGACGGAGCACCAAGGTGCAGGGTRGACTCTTCTGGATGTTGTAGTCAGACAGG
 GTGCGYCCATCTTCCAGCTGcTTTCCSaGCAAAGATCAACCTCTGCTGGTCAGGAGGRATGC
 CTTCTTGTCTYTGATCTTTGCTYTGACRTTCTCAATGGTGTCACTCGGCTCCACTTCGAGA
 GTGATGGTCTTACCAGTCAGGGTCTTCACGAAGATCTGCATCCACCTCTAAGACGGAGCA
 CCAGGTGCAGGGTGGACTCTTCTGGATgTTGTAGTCAGACAGGGTGCCTCCATCTTCCA
 GCTGTTTCCCAGCAAAGATCAACCT

FIG. 15E

11768-1&2-11735-1&2

AGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCTGTCTGACTACAAcCATC
CAGAAAGAGTCCACCCTGCACCTGGTGCTCCGTCTTAGAGGTGGGATGCAGATCTTCGTGA
AGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAyG
TCAARGCAAAGATCCARGACAAGGAAGGCATYCCTCCTGACCAGCAGAGGTTGATCTTTG
CISGGAAAgCAGCTGGAAGATGGRCGCACCTGTCTGACTACAACATCCAGAAAGAGTCYA
CCCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGCGATCTTCGTGAAGACCCTGACTGG
TAAGACCATCACCTCGAGGTGGAGCCCAGTGACACCATCGAGAATGTCAAGGCAAAGAT
CCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACAGCT
GGAAGATGGACGCACCTGTCTGACTACAACATCCAGAAAGAGTCCACcTYTGCACYTGGT
MCTBCGtCTYaGAGGKGGGRTGcaaaTCTWMGTKWagaCaCiCaCTKKYAAGRYYaTCAMCMWt
gAKKTCgAKYSCASTKWCaCTWTCRAKAAMGTyrWWGCAWagaTCCMAGACAAGGAAGGC
ATTCCTCCTGACCAGCAGAGGTTGATCT

11769.1.contig

ATGGAGTCTCACTCTGTGACCAAGGCTGGAGCGCTGTGGTGCGATATCGGCTCACTGCAGT
CTCCACTTCTGGGTTCAAGCGATCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAG
GCAGGCGTCACCATAATTTTGTATTTTAGTAGAGACATGGTTTCGCCATGTTGGCTGGG
CTGGTCTCGAACTCCTGACCTCAAGTGATCTGTCTGGCCTCCCAAAGTGTGGGATTACA
GGCGAAAGCCAACGCTCCCGGCCAGGGAACAACCTTAGAATGAAGGAAATATGCAAAAG
AACATCACATCAAGGATCAATTAATTACCATCTATTAATTACTATATGTGGGTAATTATGA
CTATTTCCCAAGCATTCTACGTTGACTGCTTGAGAAGATGTTTGTCTGCATGGTGGAGAG
TGGAGAAGGGCCAGGATTCTTAGGTT.

11769.2.contig

AGCGCGGTCTTCCGGCGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATC
CAGCTCGTTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAg
CTGGAGGAGGCAGAAAAAGCTGCAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAA
CCGGGCCATGAAGGATGAGGAGAAGATGGAGATTGAGGATGCAGCTCAAAGAGGCCA
AGCACATTGCGGAAGAGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGGTCATCC
TGGAGGGTGAGCTGGAGAGGGCAGAGAGCGGTGCGGAGGTGTCTGAACTAAAATGTGGT
GACCTGGAAGAAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCT
GAAAAGTATTCTGAAAAGGAGGACAAATATGAAGAAGAAATTAACCTTCTGTCTGACAAA
CTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAACGGTTGCAAAACTGGAAAAG
ACAATTGATGACCTGGAAGAGAAACTTGCCACG

11770.1.contig

GTGCACAGGTCCCATTATTGTAGAAAATAATAATAATTACAGTGATGAATAGCTCTTCTT
AAATTACAAAACAGAAACCACAAAGAAGGAAGAGGAAAAACCCAGGACTTCCAAGGGT
GAAGCTGTCCCCTCCTCCCTGCCACCTCCAGGCTCATTAGTGTCTTGAAGGGGCAGA
GGACTCAGAGGGGATCAGTCTCCAGGGGCCCTGGGCTGAAGCGGGTGAGGCAGAGAGTCC
TGAGGCCACAGAGCTGGGCAACCTGAGCCGCCTCTGTGGCCCCCTCCCCACCACTGCCCA
AACCTGTTTACAGCACCTTCGCCCTCCCTCTAAACCCGTCCATCCACTCTGCACTTCCCA
GGCAGGTGGGTGGGCCAGGCCTCAGCCATACTCCTGGGCGCGGGTTTCGGTGAGCAAGGC
ACAGTCCCAGAGGTGATATCAAGGCCT

FIG. 15F

11770.2.contig

GCAAGGAACTGGTCTGCTCACACTTGCTGGCTTGCGCATCAGGACTGGCTTTATCTCCTGA
CTCACGGTGCAAAGGTGCACTCTGCGAACGTTAAGTCCGTCCCCAGCGCTTGAATCCTAC
GGCCCCACAGCCGGATCCCCCTCAGCCTTCCAGGTCCCAACTCCCGTGGACGCTGAACAA
TGGCCTCCATGGGGCTACAGGTAATGGGCATCGCGCTGGCCGCTCTGGGCTGGCTGGCCGT
CATGCTGTGCTGCGCGCTGCCCATGTGGCGCGTGACGGCCTTCATCGGCAGCAACATTGTC
ACCTCGCAGACCATCTGGGAGGGCCTATGGATGAACTGCGTGGTGCAGAGCACCGGCCAG
ATGCAGTGCAAGGTGTACGACTCGCTGCTGGCACTGCCGACAGGACCTGCAGGCGGCCCGC
GCCCTCGTCATCATCA

11773.1.contig

TGCAAAAGGGACACAGGGGTTCAAAAATAAAAATTTCTTCTCCCTCCCCAACCTGTAC
CCCAGCTCCCCGACCACAACCCCTTCTCCCCCGGGAAAGCAAGAAGGAGCAGGTGTG
GCATCTGCAGCTGGGAAGAGAGAGGCCGGGGAGGTGCCGAGCTCGGTGCTGGTCTCTTC
CAATATAAATACXTGTGTCAGAACTGGAAAATCTCCAGCACCCACCACCAAGCACTCT
CCGTTTTCTGCCGTGTTTGGAGAGGGGCGGGGGCAGGGGCGCCAGGCACCGGTGGCT
GCGGTCTACTGCATCCGCTGGGTGTGCACCCGCGAGCCTCTGCTGCTCATTGTAGAAGA
GATGACACTCGGGGTCCCCCGGATGGTGGGGGCTCCCTGGATCAGCTTCCCGGTGTTGGG
GTTACACACCCAGCACTCCCCACGCTGCCCGTTCAGAGACATCTTGCACTGTTTGAGGTTG
TACAGGCCATGCTTGTCACAGTTG

11778.1.contig

GGGTTGGAGGGACTGGTTCTTTATTTCAAAAAGACACTTGTCATATTCAAGTATCAAAACA
GTTGCACTATTGATTTCTTTCTCCCAATCGGCCCAAAGAGACCACATAAAAGGAGAGT
ACATTTTAAGCCAATAAGCTGCAGGATGTACACCTAACAGACCTCCTAGAAACCTTACCAG
AAAATGGGGACTGGGTAGGGAAGGAACTTAAAGATCAACAACTGCCAGCCCACGGA
CTGCAGAGGCTGTACAGCCAGATGGGGTGGCCAGGGTGCCACAAACCCAAAGCAAAGTT
TCAAAAATAATATAAAATTTAAAAAGTTTGTACATAAGCTATTCAAGATTCTCCAGCACT
GACTGATACAAAGCACAATTGAGATGGCACTTCTAGAGACAGCAGCTTCAAACCCAGAAA
AGGGTGATGAGATGAGTTTCACATGGCTAAATCAGTGGCAAAAACACAGTCTTCTTTCTTT
CTTTCTTTCAAGGAGGCAGGAAAGCAATTAAGTGGTCACCTCAACATAAGGGGGACATGA
TCCATTCTGTAAGCAGTTGTGAAGGGG

11778-2&30-2

CAGGAACCGGAGCGCGAGCAGTAGCTGGGTGGGCACCATGGCTGGGATCACCACCATCGA
GGCGGTGAAGCGCAAGATCCAGGTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAG
CTGAGCGCCTCCAGCGAGAAGTTGAGGGAGAAAGGCGGGCCCGGAACAGGCTGAGGCT
GAGGTGGCCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGACCGTGCTCAG
GAGCGCCTGGCCACTGCCCTGCAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGT
GAGAGAGGTATGAAGGTTATTGAAAACCGGCCTTAAAGATGAAGAAAAGATGGAACCT
CCAGGAAATCCAACCTCAAAGAAGCTAAGCACATTGCAGAAGAGGCAGATAGGAAGTATG
AAGAGGTGGCTCGTAAGTTGGTGATCATTGAAGGAGACTTGAACGCACAGAGGAACGAG
CTGAGCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGGACCAGA
ACCTGAAGTGTCTGAGTGC

FIG. 15G

11782.1.contig

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTG
GCTTTCAAGAGGCCTTGAAGGACTATGATTACAACTGCTTTGTGTTCAGTGATGTGGACCT
CATTCCGATGGACGACCGTAATGCCTACAGGTGTTTTTCGAGCCACGGCACATTTCTGTT
GCAATGGACAAGTTCGGGTTTAGCCTGCCATATGTTCAGTATTTGGAGGTGTCTCTGCTCT
CAGTAAACAACAGTTTCTTGCCATCAATGGATTCCCTAATAATTATTGGGGTTGGGGAGGA
GAAGATGACGACATTTTAACAGATTAGTTTCATAAAGGCATGTCTATATCACGTCCAAATG
CTGTAGTAGGGAGGTGTCGAATGATCCGGCATTCAAGAGACAAGAAAAATGAGCCCAATC
CTCAGAGGTTTGACCGGATCGCACATACAAAGGAAACGATGCGCTTCGATGGTTTGAAC
CACTTACCTACAAGGTGTTGGATGTCAGAGATACCCGTTATATACCCAAATCAC

11782.2.contig

CTAGACCTCTAATTAAGGACACAATCATGCTGGAGAATGAACAGTCTGACCCCGAGGGC
CACAGCGAATTTTAGGGAAGGAGGCAAGAGGTGAGAAGGAAAGGAAAGAAAGGAGG
AAGGAGAAATAAGAACTGGAGACGTTGGGTGGGTGAGGGAGTGTGGTGGAGGCTCGG
AGAGATGGTAAACAACTGACTGCTATGAGTTTCAACCCCATAGTCTAGGGCCATGAG
GGCGTCAGTTCTTGGTGGCTGAGGGTCCTCCACCCAGCCACCTGGGGGAGTGGAGTGG
GGAGTTCTGCCAGGTAAGCAGATGTTGTCTCCCAAGTTCCTGACCCAGATGTCTGGCAGGA
TAACGCTGACCTGTTCCCTCAACAAGGGACCTGAAAGTAATTTGCTCTTTAC

11783-1 & 2

CCGAATTCAAGCGTCAACGATCCYTCCCTTACCATCAAATCAATTGGCCACCAATGGTACT
GAACCTACGAGTACACCGACTACGGCGGACTAATCTTCAACTCTACATACTTCCCCAT
TATTCCTAGAACCAGGCGACCTGCGACTCCTTGACGTTGACAAATCGAGTAGTACTCCCGAT
TGAAGCCCCCATTCGTATAATAATTACATCACAAGACGTCCTGCACTCATGAGCTGTCCCC
ACATTAGGCTTAAAAACAGATGCAATTCGCGACGCTAAGCCAAACCACTTTCACCGCTA
CACGACCGGGGGTATACTACGGTCAATGCTCTGAAATCTGTGGAGCAAACACAGTTTCAT
GCCCCATCGTCTAGAAATTAATTCCTTAAAAATCTTTGAAATAGGGCCCGTATTTACCCCTA
TAGCACCCCTCTACCCCTCTAG

11786.1.contig

GCTCTTACACTTTTATTGTTAATTCTTTCACATGGCAGATACAGAGCTGTCGTCTTGAAG
ACCACCACTGACCAGGAAATGCCACTTTTACAAAATCATCCCCCTTTTCATGATTGGAAC
AGTTTTCTGACCGTCTGGGAGCGTTGAAGGGTGACCAGCACATTTGCACATGCAAAAAA
GGAGTGACCCCAAGGCCTCAACCACACTTCCAGAGCTCACCATGGGCTGCAGGTGACTT
GCCAGGTTTGGGGTTCGTGAGCTTTCCTTGCTGCTGCGGTGGGAGGCCCTCAAGAACTGA
GAGGCCGGGGTATGCTTCATGAGTGTTAACATTTACGGGACAAAAGCGCATATTAGGAT
AAGGAACAGCCACAGCACTTCATGCTTGTGAGGGTTAGCTGTAGGAGCGGGTGAAAGGAT
TCCAGTTTATGAAAAATTAAGCAAACAACGGTTTTTAGCTGGGTGGGAAACAGGAAAAC
TGTGATGTCGGCCAATGACCACCATTTTCTGCCCATGTGAAGGTCCCATGAAACC

FIG. 15H

11786.2.contig

CAAGCGCTTGGCGTTTGGACCCAGTTCAGTGAGGTTCTTGGGTTTTGTGCCTTTGGGGATT
TGGTTTGACCCAGGGGTCAGCCTTAGGAAGGTCTTCAGGAGGAGGCCGAGTTCCTTCAG
TACCACCCCTCTCTCCCACTTTCCTCTCCCGCAACATCTCTGGGAATCAACAGCATATT
GACACGTTGGAGCCGAGCCTGAACATGCCCTCGGCCAGCACATGAAAAACCCCTTC
CTTGCTAAGGTGTCTGAGTTTCTGGCTCTTGAGGCTTTCCAGACTTGAAATTCATCAG
TCCATTGCTCTTGAGTCTTTCAGAGAACCTCAGATCAGGTGCACCTGGGAGAAAGACTTT
GTCCCACTTACAGATCTATCTCCTCCCTTGGGAAGGGCAGGGAATGGGGACGGTGTATGG
AGGGGAAGGGATCTCCTGCGCCCTTCAATGCCACACTTGGTGGGACCATGAACATCTTTAG
TGTCTGAGCTTCTCAAATTACTGCAATAGGA

13691.1&2

AGCGTCAAATCAGAATGGAAAAAGACTCAAACCATCATCAACACCAAGATCAAAAGGAC
AAGRATCCTTCAAGAAACAGGAAAAAACTCCTAAACACCAAAAGGACCTAGTTCTGTAG
AAGACATTAAAGCAAAAATGCAAGCAAGTATAGAAAAAGGTGGTTCTCTCCCAAAGTGG
AAGCCAAATTCATCAATTATGTGAAGATTGCTCCGGATGACTGACCAAGAGGCTATTCA
AGATCTCTGGCAGTGGAGGAAGTCTCTTAAAGAAAATAGTTTAAACAATTTGTAAAAAAT
TTCCGTCTTATTTCAATTTCTGTAACAGTTGATATCTGGCTGTCCTTTTTATAATGCAGAGT
GAGAACTTCCCTACCGTGTGTTGATAAATGTTGTCCAGGTTCTATTGCCAAGAATGTGTTGT
CCAAAATGCCTGTTTAGTTTTAAAGATGGAACCCACCTTTGCTTGGTTTTAAGTATGTA
TGGAATGTTATGATAGGACATAGTAGTACGGTGGTCAGACATGGAAATGGTGGGSMGAC
AAAAATATACATGTGAAATAA

13692.1&2

TCCGAATTCGAAGCGAATTATGGACAAACGATTCTTTTAGAGGATTACTTTTTCAATTC
GGTTTTAGTAATCTAGGCTTTGCTGTAAAGAATACAACGATGGATTTTAAATACTGTTTG
TGGAATGTGTTTAAAGGATTGATTCTAGAACCCTTGATATTTGATAGTATTTCTAACTTC
ATTTCTTTACTGTTTGCAGTTAATGTTCTGTTCTGCTATGCAATCGTTTATATGCACGTTTC
TTTAAATTTTTTAGATTTTCTGGATGTATAGTTTAAACAACAAAAAGTCTATTTAAACTG
TAGCAGTAGTTTACAGTTCTAGCAAAGAGGAAAGTTGTGGGGTTAAACTTTGTATTTCTT
TCTTATAGAGGCTTCTAAAAAGGTATTTTTATATGTTCTTTTAAACAATATTGTGTACAAC
CTTTAAACATCAATGTTTGGATCAAAACAAGACCCAGCTTATTTCTGC

13693.2

TGTGGTGGCGCGGGCTGAGGTGGAGGCCAGGACTCTGACCCTGCCCTGCCTTCAGCAA
GGCCCCCGGCAGCGCCGGCCACTACGAAGTCCCGTGGGTTGAAAAATATAGGCCAGTAAA
GCTGAATGAAATTGTCGGGAATGAAGACACCGTGAGCAGGCTAGAGGTCTTTGCAAGGGA
AGGAAATGTGCCAACATCATATTGCGGGCCCTCCAGGAACCGGCAAGACCACAAGCAT
TCTGTGCTTGGCCCCGGCCCTGCTGGGCCAGCACTCAAAGATGCCATGTTGGAACCTCAAT
GCTTCAAATGACAGGGGCATTGACGTTGTGAGGAATAAAATTAATGTTTGTCAACAA
AAAGTCACTCTTCCCAAAGGCCGACATAAGATCATCTTGGATGAAGCAGACAGCATG
ACCGACGGAGCCAGCAAGCCTTGAGGAGAACCATGGAAATCTACTCTAAACCACTCGT
TCGCCCTTGCTTGAATGCTTCGGATAAGATCATCGAGCC

FIG. 15I

13696.1-13744.1

CTTTGCAAAGCTTTTATTTTCATGTCTGCGGCATGGAATCCACCTGCACATGGCATCTTAGCT
GTGAAGGAGAAAAGCAGTGCACGAGAAGGAATGAGTGGGCGGAACCAACGGCCTCCACAA
GCTGCCTTCCAGCAGCCTGCCAAGGCCATGGCAGAGAGAGACTGCAAAACAAACACAAGCA
AACAGAGTCTCTTACAGCTGGAGTCTGAAAGCTCATAGTGGCAIGTGTGAATCTGACAA
AATTAAGTGTGCATAGTCCATTACATGCATAAAACACTAATAATAATCCTGTTTACAGG
TGAAGTGCAGCAGGAGGTCAGCTCCACCACTGCCCTCCTGCCACATCACATCAAGTGCCA
TGGTTTAGAGGGTTTTTCATATGTAATTCCTTTATTCTGTAAAAGGTAACAAAATATACAG
AACAAAACCTTCCCTTTTAAACCTAATGTTACAAATCTGTATTATCACTTGGATATAAAT
AGTATATAAGCTGATC

13700.1

CAAGGGATATATGTTGAGGGTACRGRGTGACACTGAACAGATCACAAGCAGAGAAACA
TTAGTTCTCTCCCTCCCCAGCGTCTCCTTCGTCTCCCTGGTTTTCCGATGTCCACAGAGTGA
GATTGTCCCTAAGTAACTGCATGATCAGAGTGCTGKCTTTATAAGACTCTTCATTACAGCGT
ATCCAATTCAGCAATTGCTTCATCAATGCCGTTTTTGCCAGGCTACAGGCCTTTTCAGGA
GAGTTTGAATCTCATAGTAAAAGACTGAGAAATTTAGTGCCAGACCAAGACGAATTGGG
TGTGTAGGCTGCATTNCTTTCTTACTAATTTCAAATGCTTCCTGGTAAGCCTGCTGGGAGTT
CGACACAAGTGGTTTGTGTTGCTCCAGATGCCACTTCAGAAAGATACCTAAAATAATCT
CCTTTCATTTTCAAAGTAGAACAC

13700.2

TCCGGAGCCGGGGTAGTCGCCGCCGCCGCCGCCGGTGCAGCCACTGCAGGCACCGCTGCC
GCCGCTGAGTAGTGGGCTTAGGAAGGAAGAGGTATCTCGCTCGGAGCTTCGCTCGGAA
GGGTCTTTGTTCCCTGCAGCCCTCCACCGGAATGACAATGGATAAAAGTGAGCTGGTACA
GAAAGCCAACTCGCTGAGCAGGCTGAGCGATATGATGATATGGCTGCAGCCATGAAGGC
AGTCACAGAACAGGGGATGAACCTCTCAACGAAGAGAGAAATCTGCTCTCTGTTGCCTA
CAAGAATGTGGTAAGGCCGCCGCCGCTCTTCTGGCGTGTATCTCCAGCATTGAGCAGA
AAACAGAGAGGAATGAGAAGAAGCAGCAGATGGGCAAAGAGTACCGTGAGAAGATAGA
GGCAGAACTGCAGGACATCTGCAATGATGTTCTGGAGCTTGTGGACAAATATCTTATTCC
AATGCTACACAACCCAGAAA

13701.1

AAAAAGCAGCARGTTCAACACAAAATAGAAATCTCAAATGTAGGATAGAACAAAACCAA
GTGTGTGAGGGGGGAAGCAACAGCAAAAGGAAGAAATGAGATGTTGCAAAAAGATGGA
GGAGGGTTCCCTCTCCTCTGGGGACTGACTCAAACACTGATGTGGCAGTATACACCATTC
CAGAGTCAGGGGTGTTTCTTTTGGGAGTAAGAAAAGGTGGGGATTAAGAAGACGT
TTCTGGAGGCTTAGGGACCAAGGCTGGTCTCTTCCCCCTCCCAACCCCTTGATCCCTTT
CTCTGATCAGGGGAAAGGAGCTCGAATGAGGGAGGTAGAGTTGGAAAGGGAAAGGATTC
CACTTGACAGAATGGGACAGACTCCTTCCCA

FIG. 15J

13701.2

TGGCAATAGCACAGCCATCCAGGAGCTCTTCARGCGCATCTCGGAGCAGTTCACTGCCATG
TTCCGCGCGAAGGCCCTTCCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTC
ACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAAGCAGTACCAGGATGC
CACCGCAGAAGAGGAGGAGGATTTTCGGTGAGGAGGCCGAAGAGGAUGCCTAAGCCAGAG
CCCCATCACCTCAGGCTTCTCAGTTCCTTAGCCGTCTTACTCAACTGCCCTTTCTCTCC
CTCAGAATTTGTGTTTGTCTGCCTCTATCTTGTGTTTTGTTTTCTTCTGGGGGGGTCTAGAA
CAGTGCCTGGCACATAGTAGGCGCTCAATAAATACTTGGTTGNTGAATGTCTCCT

13702.2

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTRGTCAGCCCTTGGCTCAGTGTAGAA
ACCCAGCCTGTAAGGTCGGTCTTCGTCCATCTGCTTTTTCTGAAATACACTAAGAGCAG
CCACAAAACGTAAACCTCAAGGAAACCATAAAGCTTGGAGTGCCTTAATTTTAAACCAGTT
TCCAATAAACGGTTTACTACCT

13704.2-13740.2

GGAGATGAAGATGAGGAAGCTGAGTCAGCTACGGGCARGCGGGCAGCTGAAGATGATGA
GGATGACGATGTCGATACCAAGAAGCAGAAGACCGACGAGGATGACTAGACAGCAAAAA
AGGAAAAGTTAAA

13706.1

GATGAAAATTAATACTTAAATTAATCAAAAGGCACTACGATACCACCTAAACCTACTG
CCTCAGTGGCAGTAKGCTAAKGAAGATCAAGCTACAGSACATYATCTAATATGAATGTTA
GCAATTACATAKARGAAGCATGTTTGCTTTCCAGAAGACTATGGNACAATGGTCATTWG
GGCCCAAGAGGATATTTGGCCNGGAAAGGATCAAGATAGATNAANGTAAAG

13706.2

GAGTAGCAACGCAAAGCGCTTGGTATTGAGTCTGTGGGSGACTTCGGTTCCGGTCTCTGCA
GCAGCCGTGATCGCTTAGTGAGTGCTTAGGGTAGTTGGCCAGGATGCCGAATATCAAAA
TCTTCAGCAGGCAGCTCCCACAGGACTTATCTCASAAAAATTGCTGACCGCTGGGCCTGG
AGCTAGGCAAGGTGGTGACTAAGAAATTCAGCAACCAGGAGACCTGTGTGGAAATTGGTG
AAAGTGTAACCGTGGAGAGGATGTCTACATTGTTTACAGTGGNTGTGGCGAAATCAATGAC
AATTTAATGGAGCTTTTGATCATGATTAATGCCTGCAAGATTGCTTCAGCCAGCCGGGTTA
CTGCAGTCATCCCATGCTTCCCTTATGCCCCGGCAGGATAAGAAAGATNAGAGCCGGGCC
GCCAATCTCAGCCAAGCTTGGTGAAATATGCTATCTGTAGCAGTGCAGATCATATTATCA
CCATGGACCTACATGCTTCTCAAATTCANGGCTTTTT

FIG. 15K

13707.3

ATGCAAAAGGGGACACAGGGGGTTCAAAAATAAAAATTTCTCTTCCCCCTCCCCAAACCT
GTACCCAGCTCCCCGACCACAACCCCTTCTCCCCGGGAAAGCAAGAAGGAGCAGG
TGTGGCATCTGCAGCTGGGAAGAGAGAGGGCCGGGAGGTGCCGAGCTCGGTGCTGGTCTC
TTTCCAAATATAAATACGTGTGTCAGAACTGGAAAATCCTCCAGCACCCACCACCAAGCA
CTCTCCGTTTTCTGCCGGTGTGTTGGAGAGGGGCGGNGGGCAGGGGCGCCAGGCACCGGCT
GGCTGCGGTCTACTGCATCCGCTGGGTGTGCACCCCGCA

13710.2

AGGTTGGAGAAGGTCATGCAGGTGCAGATTGTCCAGGSKCAGCCACAGGGTCAAGCCAA
CAGGCCAGAGTGGCACTGGACAGACCATGCAGGTGATGCAGCAGATCATCTAACACA
GGAGAGATCCAGCAGATCCCGGTGCAGCTGAATGCCGGCCAGCTGCAGTATATCCGCTTA
GCCCAGCCTGTATCAGGCACTCAAGTTGTGCAGGGACAGATCCAGACACTTGCCACCAAT
GCTCAACAGATTACACAGACAGAGGTCCAGCAAGGACAGCAGCAGTTCAAGCCAGTTCAC
AAGATGGACAGCAGCTCTACCAGATCCAGCAAGTCACCATGCCTGCGGGCCANGACCTCG
CCAGCCCATGTTTCATCCAGTCAAGCCAACAGCCCTTCNACGGGCAGGCCCCCAGGTGAC
CGGCGACTGAAGGGCCTGAGCTGGCAAGGCCAANGACACCCAACACAATTTTGGCATA
AGCCCCAGGCAATGGGCACAGCCTTCTTCCCAGAGGAC

13710-1

TGAGATTTATTGCATTTTCATGCAGCTTGAAGTCCATGCAAAGGRGACTAGCACAGTTTTTA
ATGCATTTAAAAATAAAAAGGGAGGTGGGCAGCAAACACACAAAGTCCTAGTTTCCTGGG
TCCCTGGGAGAAAAGAGTGTGGCAATGAATCCACCCACTCTCCACAGGGAATAAATCTGT
CTCTTAAATGCAAAGATGTTTCCATGGCCTCTGGATGCAAAATACAGAGCTCTGGGGTC
AGAGCAAGGGATGGGGAGAGGACCAGAGTAAAAAGCAGCTACACACATTACCTAAT
TCCATCTGAGGGCAAGAACAACGTGGCAAGTCTTGGGGGTAGCAGCTGTT

13711.1

TCCAGACATGCTCCTGTCTAGGCGGGGAGCAGGAACCAGACCTGCTATGGGAAGCAGAA
AGAGTTAAGGGAAGGTTTCCTTTCATTCCTGTTCCTTCTCTTTGCTTTTGAACAGTTTTTA
AATATACTAATAGCTAAGTCATTTGCCAGCCAGGTCCCGGTGAACAGTAGAGAACAAAGGA
GCTTGCTAAGAATTAATTTTGTCTGTTTTTCACCCCATTCAAACAGAGCTGCCCTGTTCCCTG
ATGGAGTTCCATTCTGCCAGGGCAGGCTGAGTAACACGAAGCCATTCAAGAAAGGCGG
GTGTGAAATCACTGCCACCCCATGGACAGACCCCTCACTCTTCTTCTTAGCCGCAGCGCT
ACTTAATAAATATATTTATACTTTGAAATTATGATAACCGATTTTCCCATGCGGCATCCTA
AGGGCACTTGCCAGCTCTTATCCGGACAGTCAAGCACTGTTGTTGGACAACAGATAAAGG
AAAAGAAAAAGAAAGAAAACAACCGCAACTTCTGT

FIG. 15L

13711.2

TGAGACGGACCACTGGCCTGGTCCCCCTCATKTGCTGTCGTAGGACCTGACATGAAACGC
AGATCTAGTGGCAGAGAGGAAGATGATGAGGAACTTCTGAGACGTCGGCAGCTTCAAGAA
GAGCAATTAATGAAGCTTAACCTACGCCCTGGGACAGTTGATCTTGAAAGAAGAGATGGAG
AAAGAGAGCCGGGAAAGGTCATCTCTGTTAGCCAGTCGCTACGATTCTCCCATCAACTCAG
CTTCACATATTCATCATCTAAACTGCATCTCTCCCTGGCTATGGAAGAAATGGGCTTCA
CCGGCCTGTTTCTACCGACTTCGCTCAGTATAACAGCTATGGGGATGTCAGCGGGGGAGTG
CGAGATTACCAGACACTTCCAGATGGCCACATGCCTGCAATGAGAATGGACCGAGGAGTG
TCTATGCCCAACATGTTGGAACCAAGATATTTCCATATGAAATGCTCATGGTGACCAACA
GAGGGCCGAAACCAATCTCAGAGAGGTGGACAGAA

13713.1&2

TCACITTTATTTTCTTGTATAAAAAACCCTATGTTGTAGCCACAGCTGGAGCCTGAGTCCGCT
GCACGGAGACTCTGGTGTGGGTCTTGACGAGGTGGTCAGTGAACCTCCTGATAGGGAGACT
TGGTGAATACAGTCTCCTTCCAGAGGTGGGGGTGAGGTAGCTGTAGGTCTTAGAAATGGC
ATCAAAGGTGGCCTTGGCGAAGTTGCCAGGGTGGCAGTGCAGCCCCGGGCTGAGGTGTA
GCAGTCATCGATACCAGCCATCATGAG

13715.4

CTGGAATATAGACCCGTGATCGACAAAACCTTTGAACGAGGCTGACTGTGCCACCGTCCCGC
CAGCCATTCCGCTCCTACTGATGAGACAAGATGTGGTGATGACAGAATCAGCTTTTGTAAAT
ATGTATAATAGCTCATGCATGTGTCCATGTCATAACTGTCTTCATACGCTTCTGCACTCTGG
GGAAGAAGGAGTACATTGAAGGGAGATTGGCACCTAGTGGCTGGGAGCTTCCAGGAACC
CAGTGGCCAGGGAGCGTGGCACTTACCTTTGTCCCTTGCTTCATTCTTGTGAGATGATAAA
ACTGGGCACAGCTCTTAAATAAAATATAAATGAACA

13717.1&2

TGAATGGGGAGGAGCTGACCCAGGAAATGGAGCTTGNGGAGACCAGGCCTGCAGGGGAT
GGAACCTTCCAGAAGTGGGCATCTGTGGTGGTGCCTCTTGGGAAGGAGCAGAAGTACACA
TGCCATGTGGAACATGAGGGGCTGCCTGAGCCCCCTACCCTGAGATGGGGCAAGGAGGAG
CCTCCTTCATCCACCAAGACTAACACAGTAATCATTGCTGTTCCGGTTGTCTTGGAGCTGT
GGTCATCCTTGGAGCTGTGATGGCTTTTGTGATGAAGAGGAGGAGAAACACAGGTGGAAA
AGGAGGGGACTATGCTCTGGCTCCAGGCTCCAGAGCTCTGATATGTCTCTCCAGATTGT
AAAGTGTGAAGACAGCTGCCTGGTGTGGACTTGGTGACAGACAATGTCTTCACACATCTCC
TGTGACATCCAGAGACCTCAGTTCTCTTTAGTCAAGTGTCTGATGTTCCCTGTGAGTCTGCG
GGCTCAAAGTGAAGAACTGTGGAGCCCAGTCCACCCCTGCACACCAGGACCCTATCCCTG
CACTGCCCTGTGTTCCCTTCCACAGCCAACCTTGCTGCTCCAGCCAAACATTGGTGGACAT
CTGCAGCCTGTCAGCTCCATGCTACCCTGACCTTCAACTCCTCACTTCCACACTGAGAATA
ATAATTTGAATGTGGGTGGCTGGAGAGATGGCTCAGCGCTGACTGCTCTTCCAAAGGTCCT
GAGTTCAAATCCCAGCAACCACATGGTGGCTCACAACCATCTGTAATGGGATCTAATACCC
TCTTCTGCAGTGTCTGAAGACASCTACAGTGTACTTACATATAATAATAAATAAG

FIG. 15M

13719.1&2

GGCCGGGCGCGCGCCCCGCCACACGCACGCCGGGCGTGCCAGTTTATAAAGGGAGAG
AGCAAGCAGCGAGTCTTGAAGCTCTGTTGGTGCTTTGGATCCATTTCCATCGGTCCTTAC
AGCCGCTCGTCAGACTCCAGCAGCCAAGATGGTGAAGCAGATCGAGAGCAAGACTGCTTT
TCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACTTCTCAGCCACGTGG
TGTGGGCCCTTGCAAAATGATCAAGCCTTCTTTCATTCCCTCTCTGAAAAGTATTCCAACGT
GATATTCCTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAGTGTGAAGTCAAA
TGCATGCCAACATTCCAGTTTTTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCA
ATAAGGAAAAGCTTGAAGCCACCATTAAATGAATTAGTCTAATCATGTTTTCTGAAAATATA
ACCAGCCATTGGCTATTTAAAACCTTGTAATTTTTTAATTTACAAAAATATAAAATATGAA
GACATAAACCCMGTTGCCATCTGCGTGACAATAAAACATTAATGCTAACACTT

13721.1

TCACATAAGAAATTTAAGCAAGTTACRCTATCTTAAAAACACAACGAATGCATTTTAATA
GAGAAACCTTCCCTCCCTCCACCTCCCTCCCCACCCTCCTCATGAATTAAGAATCTAAG
AGAAGAAGTAACCATAAAACCAAGTTTTGTGGAATCCATCATCCAGAGTGCTTACATGGT
GATTAGGTTAATATTGCCTTCTTACAAAATTTCTATTTTAAAAAAATTAACCTTGATTG
CTTATTACAAAAAAATTCAGTACAAAAGTTCAATATATTGAAAAATGCTTTTCCCTCCCT
CACAGCACCGTTTTATATATAGCAGAGAATAATGAAGAGATTGCTAGTCTAGATGGGGCA
ATCTTCAAATTACACCAAGACGCACAGTGGTTTATTTACCCTCCCTTCTCATAAG

13721.2

GGAAAGGATTCAAGAATTAGAGGACTTGCTTGCTRRAGAAAAAGACAACCTCTCGTCGCAT
GCTGACAGACAAAGAGAGAGAGATGGCGGAAATAAGGGATCAAATGCAGCAACAGCTGA
ATGACTATGAACAGCTTCTTGATGTAAAGTTAGCCCTGGACATGGAAATCAGTGCTTACAG
GAACTCTTAGAAGGCGAAGAAGAGAGGTTGAAGCTGTCTCCAAGCCCTTCTTCCCGTGT
GACAGTATCCCGAGCATCCTCAAGTCGTAGTGTACCGTACAACCTAGAGGAAAGCGGAAGA
GGGTTGATGTGGAAGAATCAGAGGCGAAGTAGTAGTGTAGCATCTCTCATTCCGCCTCAA
CCACTGGAAATGTTTGCATCGAAGAAATTGATGTTGATGGGAAATTTATCCCGCTTGAAGA
ACACTTCTGAACAGGATCAACCAATGGGAAGGCTTGGGAGATGATCAGAAAAATTGGAGA
CACATCAGTCAGTTATAAATATACCTCAA

13723.1

CATGGGTTTCACCAGGTTGGCCAGGCTGCTCTTGAACCTCTGACCTCAGGTGATCCACCCG
CCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCGCCCCCAAAGC
TGTTTCTTTTGTCTTAGCGTAAAGCTCTCTGCCATGCAGTATCTACATAACTGACGTGAC
TGCCAGCAAGCTCAGTCACTCCGTGGTCTTTTCTCTTTCCAGTTCTTCTCTCTCTTCAAG
TTCTGCCTCAGTGAAAGCTGCAGGTCCCGAGTTAAGTGATCAGGTGAGGGTTCTTTGAACC
TGGTTCTATCAGTCGAATTAATCCTTCATGATGG

FIG. 15N

13723.2

GATGTGTTGGACCCTCTGTGTCAAAAAAAAAACCTCACAAGAATCCCCTGCTCATTACAGAA
GAAGATGCATTTAAAAATATGGGTTATTTCAACTTTTATCTGAGGACAAGTATCCATTAA
TTATTGTGTCAGAAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTATGGGAGGAG
GTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTIGATGACAGTAAAAATGGCC
TTTCTGCATGGGAACCTTATTGAGCTTATTGGAAATGGACAGTTTAGCAAAGGCATGGACCG
GCAGACTGTGTCTATGGCAATTAATGAAGTCTTAAATGAAGTTATATTAGATGTGTTAAAG
CAGGGTTACATGATGAAAAAGGGCCACAGACGGAAAACTGGACTGAAAAGATGGTTTGTA
CTAAAACCAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGAC
ATTCTCTTGATGAAAATTGCTGTGTAGAAGTCCTTGCCTGACAAAAGATGGAAAGAAAT
GCCTTTT

13725.1

GACTGGTTCTTTATTTCAAAAAGACACTTGTCAATATTCAGTRTCAAAACAGTTGCACTATT
GATTTCTCTTTCTCCCAATCGGCCCAAAGAGACCACATAAAAGGAGAGTACATTTTAAGC
CAATAAGCTGCAGGATGTACACCTAACAGACCTCTAGAAACCTTACCAGAAAATGGGGA
CTGGGTAGGGAAGGAACTTAAAGATCAACAACTGCCAGCCACGGACTGCAGAGGCT
GTCACAGCCAGATGGGGTGGCCAGGGTGCCACAAACCCAAAGCAAAGTTTCAAAATAATA
TAAATTTAAAAAGTTTGTACATAAGCTATTCAAGATTCTCCAGCACTGACTGATACAA
AGCACAATTGAGATGGCACTTCTAGAGACAGCAGCTTCAAACCCAGAAAAGGGTGATGAG
ATGAAGTTTCACATGGCTAAATCAGTGGCAAAAACACAGTCTTCTTTCTTTCTTTCAA
GGANGCAGGAAAGCAATTAAGTGGTCACCTTAACATAAGGGGGAC

13725.2

TGGGTGGGCACCATGGCTGGGATCACCACCATCGAGGCGGTGAAGCGCAAGATCCAGGT
CTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAGCTGAGCGCCTCCAGCGAGAAGTTGA
GGGAGAAAAGCGGGCCCGGGAACAGGCTGAGGCTGAGGTGGCCTCCTTGAACCGTAGGA
TCCAGCTGGTTGAAGAAGAGCTGGACCGTCTCAGGAGCGCCTGGCCACTGCCCTGCAAA
AGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGAGAGGTATGAAGGTTATTGAA
AACCGGGCCTTAAAGATGAAGAAAAGATGGAAGTCCAGGAAATCCAAGTCAAGAAAGC
TAAGCACATTGCAGAAGAGGCAGATAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTGAT
CATTGAAGGAGACTTGGAACCGCACAGAAGGAACGAGCTTGAGCTTGGCAAAAGTCCCGT
TGCCCAGAGATGGGATGAACCAGATTAGACTGATGGACCANAACC

13726.1&2

AGGGGCNGCGGTGCGTGGGCCACTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGCAC
CTGGAAGCGCCCCGAGAGTGACAGCGTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGT
TAAACTCTGCTCTGAGCCTCCTTGTGCGCTGCATTTAGATGGCTCCCGCAAAGAAGGGTGG
CGAGAAGAAAAAGGGCCGTTCTGCCATCAACGAAGTGGTAACCCGAGAATACACCATCAA
CATTACAAGCGCATCCATGGAGTGGGCTTCAAGAAGCGTGACCTCGGGCACTCAAAGA
GATTCGGAATTTGCCATGAAGGAGATGGGAACTCCAGATGTGCGCATTGACACCAGGCT
CAACAAAGCTGTCTGGGCCAAAGGAATAAGGAATGTGCCATACCGAATCCGGTGTGCGGC
TGTCCAGAAAACGTAATGAGGATGAAGATTACCAAATAAGCTATATACTTTGGTTACCTA
TGTACCTGTTACCACTTTCAAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTG
ATCGTCAGATCAAAATAAGTTATAAAAT

FIG. 150

13727.1

TCGGGAGCCACACTTGGCCCTCTTCCTCTCCAAAGSGCCAGAACCTCCTTCTCTTTGGAGAA
TGGGGAGGCCTCTTGGAGACACAGAGGGTTTCACCTTGGATGACCTCTAGAGAAATTGCC
CAAGAAGCCACCTTCTGGTCCCAACCTGCAGACCCACAGCAGTCAGTTGGTCAGGCCCT
GCTGTAGAAGGTCACCTGGCTCCATTGCCTGCTTCCAACCAATGGGCAGGAGAGAAGGCC
TTTATTTCTCGCCACCCATTCTCTGTACCAGCACCTCCGTTTTCAGTCAGTGTTGTCCA
GCAACGGTACCGTTTACACAGTCACCTCAGACACACCATTTACCTCCCTTGCCAAGCTGT
TAGCCTTAGAGTGATTGCAGTGAACACTGTTTACACACCGTGAATCCATTCCCATCAGTCC
ATTCCAGTTGGCACCAGCCTGAACCATTTGGTACCTGGTGTTAACTGGAGTCCTGTTTACA
AGGTGGAGTCGGGGCTTGCTGACTTCTCTTCATTTGAGGGCAC

13727.2

ACCTAGACAGAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCAATTCCTTGGTAGT
TTGTCTGAAACCCTACTGGAGAAGTCAGCATGAGGCACCTACTGAGAGAAGTGCCGAGA
AACTGCTGACTGCATCTGTTAAGAGTTAACAGTAAAGAGGTAGAAGTGTTTCTGAATCA
GAGTGGAAGCGTCTCAAGGGTCCACAGTGGAGGTCCCTGAGCTACCTCCCTTCCGTGAGT
GGGAAGAGTGAAAGCCCATGAAGAAGTGAAGCAAGGATGGGGTTCCTGGGCTCCA
GGCAAGGGCTGTGCTCTCTGCAGCAGGGAGCCCCACGAGTCAGAAGAAAAGAACTAATCA
TTTGTGCAAGAAACCTTGCCCGGATACTAGCGGAAAAGTGGAGGCGGNGGTGGGGGCAC
AGGAAAGTGGAAGTGATTTGATGGAGAGCAGAGAAGCCTATGCACAGTGGCCGAGTCCAC
TTGTAAAGTG

13728.1&2

TTCAAGCAATTGTAACAAGTATATGTAGATTAGAGTGAGCAAAATCATATACAATTTTCAT
TTCCAGTTGCTATTTTCCAAATGTTCTGTAATGTCGTTAAATTAATTAATAAATAA
GCCAAAAATTATATTTATGACAAGAAAGCCATCCCTACATTAATCTTACTTTTCCACTCAC
CGGCCCATCTCCTTCTCTTTTCTTAATATGCCATTAAACTGTTCTACTGGGCCGGGGC
TGTGGCTCATGCCTGTAATCCAGCATTTTGGGAGGCCAAGGCAGGCGGATCATGAGGTC
AAGAGATTGAGACCATCCTGGCCAACATGGTGAAACCCCGCTCGACTAAGAATACAAAA
ATTAGCTGGGCATGGTGGCGCATGCCTGTAGTCTCAGCTACTCGGGAGGCTGAGGCAGAA
GAATCGCTTGAACCCGGGAGGCAGAGGATGCAGTGAGCCCCGATCGCGCCACTGCACTCT
AGCCTGGGCGACAGACTGAGACTCTGCTC

13731.1&2

TGTGCCAGTCTACAGGCCTATCAGCAGCGACTCCTTCAGCAACAGATGGGGTCCCCTGTTT
AGCCCAACCCCATGAGCCCCCAGCAGCATATGCTCCCAATCAGGGCCAGTCCCCACACCT
ACAAGGCCAGCAGATCCCTAATTCTCTCTCCAATCAAGTGGCTCTCCCCAGCCTGTCCCTT
CTCCACGGCCACAGTCCCAGCCCCCCTCCAGTCTTCCCCAAGGATGCAGCCTCAGCC
TTCTCCACACCAGTTTCCCCACAGACAAGTTCCCCACATCCTGGACTGGTAGTTGCCAG
GCCAACCCCATGGAACAAGGGCATTTTGCCAGCC

FIG. 15P

13734.1&2

TGTA AAAA CTTG TTTT AATTTT GTATA AAAA TAAAGGTGGTCCATGCCACGGGGGCTGTAGGAAATCCAAGCAGACCAGCTGGGGTGGGGGGATGTAGCCTACCTCGGGGACTGTCTGTCTTCAAAAACGGGCTGAGAAGGCCCGTCAGGGGCCAGGTCCCACAGAGAGGCCTGGGATCTCCCCCAACCCGAGGGGCAGACTGGGCAGTGGGGAGCCCCCATCGTGCCCCAGAGGTGGCCACAGGCTGAAGGAGGGGCTGAGGCACCGCAGCCTGCAACCCCCAGGGCTGCA GTCCACTAACTTTTACAGAATAAAAAGGAACATGGGGATGGGGAAAAAGCACCAGGTCAGGCA GGGCCCGAGGGCCCCAGATCCCAGGAGGGCCAGGACTCAGGATGCCAGCACCACCCTAGCAGCTCCACAGCTCCTGGCACAGGAGGCCGACGGATTGGCACAGGCCGCTGCTGGCCA TCACGCCACATTTGGAGAACTTGTCCCGACAGAGGTCAGCTCGGAGGAGCTCCTCGTGGGG ACACACTGTACGAACACAGATCTCCTTGTTAATGACGTACACACGGCGGAGGCTGCGGGG ACAGGGCACGGGAGGTCTCAGCCCCACTT

13736.2

ATGGCTGCTGGATTTAGGTGGTAATAGGGGCTGTGGGCCATAAATCTGAAGCCTTGAGAA CCTTGGGTCTGGAGAGCCATGAAGAGGGAAGGAAAAAGAGGGCAAGTCTGAACCTAACC AATGACCTGATGGATTGCTCGACCAAGACACAGAAGTGAAGTCTGTGTCTGTGCACTTCCC ACAGACTGGAGTTTTTGGTGCTGAATAGAGCCAGTTGCTAAAAAATTGGGGGTTTGGTGA AGAAATCTGATTGTTGTGTGATTCAATGTGTGATTTAAAAATAAACAGCAACAACAATA AAAACCCTGACTGGCTGTTTTTCCCTGTATTCTTTACAATAATTTTTGACCCTCTGAAAA TTATTATACTTCACCTAAATGGAAGACTGCTGTGTTGTGGAAATTTTGTAAATTTTAAATT TATTTTATTCTCTCTCTTTTATTTTGCTGCAGAATCCGTTGAGAGACTAATAAGGCTTA ATATTTAATTGATTGTGTTAATATGTATATAAAT

13744.2-13696.2

GGCATGCGAGCGCACTCGGCGGACGCAAGGGCGGCGGGAGCACACGGAGCACTGCAGG CGCCGGGTGGGACAGCGTCTTCGCTGCTGCTGGATAGTCGTGTTTCGGGGATCGAGGAT ACTCACCAGAAACCGAAATGCCGAAACCAATCAATGTCCGAGTTACCACCATGGATGCA GAGCTGGAGTTTGCAATCCAGCCAAATACAACCTGGAACAGCTTTTGTATCAGGTGGTA AAGACTATCGGCCTCCGGGAAGTGTGGTACTTTGGCCTCCACTATGTGGATAATAAAGGAT TTCTACCTGGCTGAAGCTGGATAAGAAGGTGTCTGCCAGGAGGTCAGGAAGGAGAATC CCGTCCAGTTCAAGTTCCGGGCCAAAGTTCTACCCTGAAGATGTGGCTGAGGAGCTCATCC AGGACATCACCAGAACTTTTCTCTTCAAGTGAAGGAAGGAATCCTTAGCGATGAGAT CTACTGCCCCCTTGARACTGCCGTGCTCTTGGGGTCTACGCTTGTGCATGCCAAGTTTGG GGA CTACCAAGAAG

13746.1&2-13720.1&2

GAAGGAGTCGGGATACTCAGCATTGATGCACCCCAATTTCAAAGCGGCATTCTTCGGCAG GTCTCTGGGACAATCTCTAGGGTCACTACCTGGAACTCGTTAGGGTACAACCTGAATGCTG AAAGGAAAGAACACCTGCAGAACCGGACAGAAATTCACCCCGCGATCAGCTGATTGATC TCGGTGACACAGAGTCATGGCTAAAGATGACGAGGACGTTGTCAATTCCTGGGCTTTTC GAAGTGAGTCCAGCAGCAGTCTGAGGTATTCGGGCCGGTTATGCACCTGGACCACCAGCA CCAGCTCCCGGGGGGCCAGGTGCCAGCCTTATCTACATTCTCAGGGTCTGATCAAAGTT CAGCTGGTACACCAGGGACCGGTACCGCAGCGTCAGGTTGTCCGCTCGGGCTGGGGGACC GCCGGGACCAGGGAAGCCGCCGACACGTTGGAGACCCTGCGGATGCCACAGCCACAGAG GGGTGGTCCCCACCGCGGCCGCCGACCCCGCGGGTTGCGGTCCAGCAACGGTGGG GCGAGGGCCTCGTTCTCTTTGTGCGCCATTGCTGCTCCAGAGGACGAAGCCGAGGCGG CCACCAGAGCGTCAGGATTAGCACCTTCGGTTTGTAGATGCGGAACCTCATGGTCTCCAG GGCCGGGAGCGCAGCTACAGCTCGAGCGTCGCGCGCCGCGCTAGGAGCCGCGGCTCGGCT TCGTCTCCGTCTCTCCATTACAGCACCACGGGTCCCGGAAAAAGCTCAGCCSCGGTCCCAA CCGCACCTAGCTTCGTTACCTGCGCCTCGCTTG

FIG. 15Q

14347.1

CAGATTTTATTGTCAGTCGTCAGTGGGGCCGTTTCTTGCTGCTTATTTGTCTGCTAGCCTG
CTCTTCCAGCTGCATGGCCAGGCGCAAGGCCTTGATGACATCTCGCAGGGCTGAGAAATGC
TTGGCTTGCTGGGCCAGAGCAGATTCCGCTTTGTTACAAAGGTCTCCAGGTCATAGTCTG
GCTGCTCGGTCACTCAGAGAGCTCAAGCCAGTCTGGTCTTGCTGTATGATCTCCTTGAG
CTCTTCCATAGCCTTCTCCTCCAGCTCCCTGATCTGAGTCATGGCTTCTTAAAGCTGGACA
TCTGGGAAGACAGTTCCTCCTTCTCCTTGGATAAATTGCTGGAATCAGCGCCCCGTTAGA
GCAGGCTTCCATCTCTTCTGTTTCCATTGAATCAACTGCTCTCCACTGGGCCCCACTGTGGG
GGCTCAGCTCCTTGACCCTGCTGCATATCTTAAGGGTGTAAAGGATATTCACAGGAGCT
TATGCCTGGT

14347.2

CTCCTCTTGGTACATGAACCCAAGTTGAAAGTGGACTTAACAAAGTATCTGGAGAACCAA
GCATTCTGCTTTGACTTTGCATTTGATGAAACAGCTTCGAATGAAGTTGTCTACAGGTTTAC
AGCAAGGCCACTGGTACAGACAATCTTTGAAGGTGGAAGCAACTTGTCTTGCATATGG
CCAGACAGGAAGTGGCAAGACACATACTATGGGCGGAGACCTCTCTGGGAAAGCCCAGAA
TGCATCCAAAGGGATCTATGCCATGGCCTCCGGGACGTCTTCTTGAAGAATCAACCCT
GCTACCGGAAGTTGGGCCTGGAAGTCTATGTGACATTCTTCGAGATCTACAATGGGAAGCT
GTTTGACCTGCTCAACAAGAAGGCCAAGCTTGCGGTGCTGGAAGACGGCAAGCAACAGG
TGCAAGTGGTGGGGGCTTGCAAGAACATCTGGNTAACTCTGCTTGATGATGCCANTCAAG
ATGATCGACATGGGCAGCGCCTGCAGA

14348.2&14350.1&2

TCCCGAATTCAAGCGACAAATTGGAWAGTGAAATGGAAGATGCCTATCATGAACATCAGG
CAAATCTTTTGCGCCAAGATCTGATGAGACGACAGGAAGAATTAAGACGCATGGAAGAAC
TTCACAATCAAGAAATGCAGAAACGTAAAGAAATGCAATTGAGGCAAGAGGAGGAACGA
CGTAGAAGAGAGGAAGAGATGATGATTCGTCAACGTGAGATGGAAGAACAATGAGGCG
CCAAAGAGAGGAAAGTTACAGCCGAATGGGCTACATGGATCCACGGGAAAGAGACATGC
GAATGGGTGGCGGAGGAGCAATGAACATGGGAGATCCCTATGGTTCAGGAGGCCAGAAA
TTTCCACCTCTAGGAGGTGGTGGTGGCATAGGTTATGAAGCTAATCCTGGCGTTCCACCAG
CAACCATGAGTGGTTCATGATGGGAAGTGACATGCGTACTGAGCGCTTTGGGCAGGGAG
GTGCGGGGCTGTGGGTGGACAGGGTCTAGAGGAATGGGGCTGGAATCCAGCAGGAT
ATGGTAGAGGGAGAGAAGAGTACGAAGGC

14349.1&2

TTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCCGAGTGACACCATT
GAGAATGTCAAGGCAAAGATCCAAGACAAGGAAGGCATCCCTCCTGACCAGCAKAGGTTG
ATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAA
GAGTCCACCCTGCACCTGGTGTCTCCGTCTCAGAGGTGGGATGCAAACTTCTGTAAGACCC
TGACTGGTAAGACCATCACCTCGAGGTGGAGCCAGTGACACCATCGAGAATGTCAAGG
CAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGA
AACAGCTGGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACTCTGC
ACTTGGTCTCTGCGCTTGAGGGGGGGTGTCTAAGTTCCCTTTTAAGGTTTCAACAAATTC
ATTGCACTTTCTTTCAATAAAGTTGTTGCATT

FIG. 15R

14352.1&2

GCGCGGGTGCGTGGGCCACTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGCACCTGGA
AGCGCCCGAGAGTGACAGCGTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGTTAAAC
TCTGCTCTGAGCCTCCTTGTGCGCTGCATTTAGATGGCTCCCGCAAAGAAGGGTGGCGAGA
AGAAAAAGGGCCGTTCTGCCATCAACGAAGTGGAACCCGAGAAATACCCATCAACATTC
ACAAGCGCATCCATGGAGTGGGCTTCAAGAAGCGTGACCTCGGGCACTCAAAGAGATTC
GGAAATTTGCCATGAAGGAGATGGGAACTCCAGATGTGCGCATTGACACCAGGCTCAACA
AAGCTGTCTGGGCCAAAGGAATAAGGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCA
GAAAACGTAATGAGGATGAAGATTACCAAATAAGCTATATACTTTGGTTACCTATGTACC
TGTTACCACTTTCAAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTGATCGT

14353.1

AATTCTTTATTTAAATCAACAACTCATCTTCTCAAGCCCCAGACCATGGTAGGCAGCCC
TCCCTCTCCATCCCCTACCCCCACCCCTTAGCCACAGTGAAGGGAATGGAAAATGAGAAGC
CACGAGGGCCCCCTGCCAGGGAAGGCTGCCCCAGATGTGTGGTGAGCACAGTCAGTGCAGC
TGTGGCTGGGGCAGCAGCTGCCACAGGCTCCTCCCTATAAATTAAGTTCCTGCAGCCACAG
CTGTGGGAGAAGCATACTTGTAGAAGCAAGGCCAGTCCAGCATCAGAAGGCAGAGGCAG
CATCAGTGACTCCCAGCCATGGAATGAACGGAGGACACAGAGCTCAGAGACAGAACAGG
CCAGGGGAAGAAGGAGAGACAGAATAGGCCAGGGCATGGCGGTGAGGGA

14353.2

TGATGAATCTGGGTGGGCTGGCAGTAGCCCCGAGATGATGGGCTCTTCTCTGGGGATCCCAA
CTGGTTCCCTAAGAAATCCAAGGAGAATCCTCGGAATCTCTCGGATAACCAGCTGCAAGA
GGGCAAGAACGTGATCGGGTTACAGATGGGCACCAACCGCGGGGCGTCTCANGCAGGCAT
GACTGGCTACGGGATGCCACGCCAGATCCTCTGATCCCAACCCAGGCCTTGCCCCTGCCCT
CCCACGAATGGTTAATATATATGTAGATATATATTTAGCAGTGACATTCCCAGAGAGCCC
CAGAGCTCTCAAGCTCCTTCTGTGAGGGTGGGGGGTTCAAGCCTGTCTGTACCTCTGA
AGTGCCTGCTGGCATCCTCTCCCCATGCTTACTAATAACATTCCCTTCCCCATAGCC

17182.1&2

AGCGGAGCTCCCTCCCCTGGTGGCTACAACCCACACACGCCAGGCTCAGGCATCGAGCAG
AACTCCAGCGACTGGGTAACCACTGACATTCAGGTGAAGGTGCGGGACACCTACCTGGAT
ACACAGGTGGTGGACAGACAGGTGTATCCGAGTGTACGGGGGGCATGTGCTCTGTG
TACCTGAAGGACAGTGAGAAGGTTGTCAGCATTTCCAGTGAGCACCTGGAGCCTATCACC
CCCACCAAGAACAACAAGGTGAAAGTGATCCTGGGCGAGGATCGGGAAGCCACGGGCGT
CCTACTGAGCATTGATGGTGAGGATGGCATTGTCCGTATGGACCTTGATGAGCAGCTCAAG
ATCCTCAACCTCCGCTTCTGGGGAAGCTCCTGGAAGCCTGAAGCAGGCAGGGCCGGTGG
ACTTCGTGGATGAAGAGTGATCCTCCTTCCCTGGCCCTTGGCTGTGACACAAGATC
CTCCTGCAGGGCTAGGCGGATTGTTCTGGATTTCCTTTTGTCTTTTCTTTTAGGTTTCCATCT
TTTCCCTCCCTGGTGTCTATTGGAATCTGAGTAGAGTCTGGGGGAGGGTCCCCACCTTCCT
GTACCTCCTCCCCACAGCTTGCTTTTGTGTACCGTCTTCAATAAAAAGAAGCTGTTTGGT
CTA

FIG. 15S

17183.2

GGTTCACAGCACTGCTGCTTGTGTGTTGCCGGCCAGGAATTCCAGGCTCACAAGGCTATCT
TAGCAGCTCGTTCTCCGGTTTTAGTGCCATGTTTGAACATGAAATGGAGGAGAGCAAAAA
GAATCGAGTTGAAATCAATGATGTGGAGCCTGAAGTTTTTAAGGAAATGATGTGCTTCATT
TACACGGGGAAGGCTCCAAACCTCGACAAAATGGCTGATGATTTGCTGGCAGCTGCTGAC
AAGTATGCCCTGGAGCGCTTAAAGGTCATGTGTGAGGATGCCCTCTGCAGTAACCTGTCCG
TGGAGAACGCTGCAGAAATTCTCATCCTGGCCGACCTCCACAGTGCAGATCAGTTGAAAA
CTCAGGCAGTGGATTTCATCAACTATCATGCTTCGGATGTCTTGGAGACCTCTTGGG

17186.1&2

TCGTAGCCATTTTTCTGCTTCTTTGGAGAATGACGCCCACTGACTGCTCATTGTCGTTGGT
TCCATGCCAATTGGTGAAATAGAACCTCATCCGGTAGTGGAGCCGGAGGGACATCTTGT
ATCAACGGTGATGGTGCGATTTGGAGCATACCAGAGCTTGGTGTTCTCGCCATACAGGGCA
AAGAGGTTGTGACAAAGAGGAGAGATACGGCATGCCCTGTGCAGCCCTGATGCACAGTTCC
TCTGCTGTGTA CTCTCCACTGCCAGCCGGAGGGGCTCCCTGTCCGACAGATAGAAGATCA
CTTCCACCCCTGGCTTG

17187.1&2

TGGCACACTGCTCTTAAGAACTATGAWGATCTGAGATTTTTTTGTGTATGTTTTGACTCT
TTTGAGTGGTAATCATATGTGTCTTTATAGATGTACATACCTCCTTGACAAATGGAGGGG
AATTCATTTTCATCACTGGGAGTGCTTAGTGATAAAAACCATGCTGGTATATGGCTTC
AAGTTGTAAAAATGAAAGTGACTTTAAAAGAAAATAGGGGATGGTCCAGGATCTCCACTG
ATAAGACTGTTTTAAGTAACCTAAGGACCTTTGGGTCTACAAGTATATGTGAAAAAAATG
AGACTTACTGGGTGAGGAAATTCATTGTTTAAAGATGGTCGTGTGTGTGTGTGTGTGTG
TG
ACTGKGTAAATATATGTYTGATAATGATTTGCTYTTTGVCMACTAAAATTAGGVCTGTATA
AGTWCTARATGCMTCCTGGGKGTGATYTTCCMAGATATTGATGATAMCCCTTAAAATT
GTAACCYGCCTTTTCCCTTTGCTYTCMATTAAAGTCTATTCAAAG

17191.1&89.1

GGGGGTAGGCTCTTTATTAGACGGTTATTGCTGTACTACAGGGTCAGAGTGCAGTGTAAAGC
AGTGTGAGAGGCCCCGCTTCAGCCCAAGAATGTGGATTTCTCTCCCTATTGATCACAGTG
GGTGGGTTTCTTCAGAAAAGCCCCAGAGGCAGGGACCAAGTGAAGTCTCAAGGTTAGAAGTG
GAACTGGAAGGCTTCAGTCACATGCTGCTTCCACGCTTCCAGGCTGGGCAGCAAGGAGGA
GATGCCCATGACGTGCCAGGTCTCCCCATCTGACACCAAGTGAAGTCTGGTAGGACAGCAG
CCGCACGCCTGCCTCTGCCAGGAGGCCAATCATGGTAGGCAGCATTGCAGGGTCAGAGGT
CTGAGTCCGGAATAGGAGCAGGGGCAAGTCCCTGCGGAGAGGCACTTCTGGCCTGAAGAC
AGCTCCATTGAGCCCCCTGCAGTACAGGYGTAGTGCCTTGGACCAAGCCACAGCCTGGTA
AGGGGCGCCTGCCAGGGCCACGGCCAGGAGGCA

FIG. 15T

17192.1&2

TAATTTCTTAGTCGTTTGAATCCTTAAGCATGCAAAAGCTTTGAACAGAAGGGTTCACAA
AGGAACCAGGGTTGTCTTATGGCATCCAGTTAAGCCAGAGCTGGGAATGCCTCTGGGTCAT
CCACATCAGGAGCAGAAGCACTTGACTTGTGGTCTGCTGCCACGGTTTGGGCGCCACC
ACGCCCACGTCCACCTCGTCTCCCTGCCGCCACGTCCCTGGGCGGCCAAGGTCTCAAAA
TTGATCTCCAGCTGAGACGTTATATCATTGCTGGCTTCCGGAAATGATGGTCCATAACCG
AATCTTCAGCATGAGCCTCTTCACTCTTTGATTTATGAAGAACAAATCCCTTCTTCCACTGC
CCATCAGCACCTTCATTTGGTTTTCGGATATTAATTTCTACTTTTGGCCGGTCTTATTTGA
ATAGCCTTCCACTCATCCAAAGTCATCTCTTTGGACCTCCTCTTTACCTCTTCAACTCA
TTCTCCTTATTTTCAGTGTCTGCCACTGGATGATGTTCTTCACCTTCAGGTGTTTCCTCAGTC
ACATTTGATTGATCCAAGTCAGTTAATTCGTCTTTGACAGTTCCCCAGTTGTGAGATCCGCT
ACCTCCACGTTTGTCTCGTGCTTACAGCCAGATCTATCACTTCCACTATGCCTATCAAATT
CACGTTTGGCACGAGAATCAAATCCATCTCCTCGGCCCATTCACGTCACGGCCCCCTCG
ACCTCTTCCAAGACCACGACCTCGAATAGGTCGGTCAATAATCGGTCTATCAACTGAA
AATTCGCTCCTTCACCTTTTCTTCAAGTGGCTTTTGAATCTTCGTTACGAGGTGGTCG
CCTTTCTGGTCTTCTATCAATTATTTCCCTTCACCTGAAGTTGTTGATCAGGTCTTCTTC
AACTCGTGC

17193

AAGCGGATGGACCTGAGTCAGCCGAATCCTAGCCCCCTTCCCTTGGGCCTGCTGTGGTGCTC
GACATCAGTGACAGACGGAAGCAGCAGACCATCAAGGCTACGGGAGGCCCGGGGCGCTT
GCGAAGATGAAGTTTGGCTGCCTCTCCTTCCGGCAGCCTTATGCTGGCTTTGTCTTAAATG
GAATCAAGACTGTGGAGACGCGCTGGCGTCTCTGCTGAGCAGCCAGCGGAAGTGTACCA
TCGCCGTCCACATTGCTCACAGGGAAGGCGATGCCTGTGGGAGCTGCTGGTGG
AGAGACTCGGGATGACTCCTGCTCAGATTGAGGCTTGTCTAGGAAAGGGGAAAAGTTTG
GTCGAGGAGTGATAGCGGGAAGTTCGTTGACATTGGGGAACTTTGCAATGCCCCGAAGACT
TAACTCCCGATGAGGTTGTGGAACTAGAAAATCAAGCTGCACTGACCAACCTGAAGCAGA
AGTACCTGACTGTGATTTCAAACCCAGGTGGTTACTGGAGCCCATACCTAGGAAAGGAG
GCAAGGATGTATTCCAGGTAGACATCCCAGAGCACCTGATCCCTTTGGGGCATGAAGTGT
GACAAGTGTGGGCTCCTGAAAGGAATGTTCCRGAGAAACCAGCTAAATCATGGCACCTTC
AATTTGCCATCGTGACGCAGACCTGTATAAATTAGGTTAAAGATGAATTTCCACTGCTTTG
GAGAGTCCCACCCACTAAGCACTGTGCATGTAAACAGGTTCTTTGCTCAGATGAAGGAA
GTAGGGGGTGGGGCTTTCTTGTGTGATGCCTCCTTAGGCACACAGGCAATGTCTCAAGTA
CTTTGACCTTAGGGTAGAAGGCAAAGCTGCCAGTAAATGTCTCAGCATTGCTGCTAATTTT
GTCTCTGCTAGTTTCTGGATTGTACAAATAAATGTGTTGTAGATGA

FIG. 15U

16443.1.edit

TCGAGCGGCCGCCGGGCAGGTGTCGGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCATTGCTCTCCCACTCCACGGCGATGTCGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTGAGGCTGACCTGGTCTTTGGTCATCTCTCCGGGATGGGGGCAGGGTGAC
ACCTGTGGTTCTCGGGGCTGCCCTTTGGCTTTGGAGATGGTTTTCTCGATGGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCACTTGTACTCTTGCATTCAACCAGTCTGGTGCANGAC
GGTGAGGACGCTNACCACACGGTACGNGCTGGTGTACTGCTCCTCCCGCGGCTTTGTCTTG
GCATTATGCACCTCCACGCCGTCCACGTACCAATTGAACCTGACCTCAGGGTCTTCGTGGC
TCACGTCCACCACCACGCATGTAACCTCAAANCTCGGNCGCGANACGC

16443.2.edit

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGCGTCTCACCGTCTGCA
CCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCCCTCCCAGC
CCCCATCGAGAAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACAC
CCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTACGCTGACCTGCCTGGTCAA
AGGCTTCTATCCAGCGACATCGCCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACA
ACTACAAGACCACGCCTCCCGTGTGGACTCCGACACCTGCCGGGCGGCCGCTCGA

16444.2.edit

AGCGTGGTTNCGGCCGAGGTCCCAACCAAGGCTGCANCCTGGATGCCATCAAAGTCTTCTG
CAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCAGAGAAGAA
CTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGTTCCGGCAGAGCATGAC
CGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTGCCGATGTGGACCTGCCC
GGGCGGNCGCTCGA

16445.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCGACCTGCCGTGACCTCAAGATGTGC
CACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGAT
GCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCA
GTGTGGCCAGAGAAGTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGT
TCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTG
CCGATGTGGACCTGCCCGGGCGGCCGCTCGA

16445.2.edit

TCGAGCGGTCGCCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGNCATGCTCTCGCCGAACCAGACATGCCTCTTGNCCTTGGGGTTCT
TGCTGATGTACUAGNTCTTCTGGGCCCACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
ANTCTCCATGTTGCANAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGACAGAGTGGCACATCTTGAGGTCACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGTCGCGACACGCT

16446.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCTCCTCAGAGCGGTAGCTGTTCTTATTGCCCCGGCAGC
CTCCATAGATNAAGTTATTGCANGAGTTCCTCTCCACGTCAAAGTACCAGCGTGGGAAGG
ATGCACGGCAAGGCCAGTGACTGCGTTGGCGGTGCAGTATTCTTCATAGTTGAACATATC
GCTGGAGTGGACTTCAGAATCCTGCCTTCTGGGAGCACTTGGGACAGAGGAATCCGCTGC
ATTCTGCTGGTGGACCTCGGCCGCGACACGCT

16446.2.edit

AGCGTGGTCGCGGCCGAGGTCCACCAGCAGGAATGCAGCGGATTCTCTGTCCCAAGTGC
TCCCAGAAGGCAGGATTCTGAAGACCACTCCAGCGATATGTTCAACTATGAAGAATACTG
CACCGCCAACGCAGTCACTGGGCCCTTGCCGTGCATCCTTCCCACGCTGGTACTTTGACGTG
GAGAGGAACTCCTGCAATAACTTCATCTATGGAGGCTGCCGGGGCAATAAGAACAGCTAC
CGCTCTGAGGAGGACCTGCCCGGGCGGCCGCTCGA

16447.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCT
TGCTGATGTACCAGTTCTTCTGGGCCCACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGCCAGAATGGCACATCTTGAGGTCACGGCANGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACACGCT

FIG. 15W

16447.2.edit

AGCGTGGTCGCGGCCGAGGTCAAGAAACCCCGCCGACCTGCCGTGACCTCAAGATGTG
CCACTCTGGCTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGA
TGCCATCAAAGTCTCTGCAACATGGAGACTGGTGAGACCTGCCGTGACCCACTCAGCCC
AGTGTGGCCCAAGAAGTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGG
CTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCT
GCCGATGTGGACCTGCCCGGGCGGCCGCTCGA

16449.1.edit

AGCGTGGTCGCGGCCGAGGTCCTGTGACAGTGGCACTGGTAGAAGNTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTG
CTGNAATGGGGCCCATGANATGGTTGCTGAGAGAGAGCTTCTTGTCTACATTCCGGCGG
GTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGNGGGCGGTGNGGTCCGCCTAAAA
CCATGTTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCANAAGTGCCAGGAA
GCTGAATACCATTTCCAGTGTACATCCAGGGTGGGTGACGAAAGGGGTCTTTGAACTGT
GGAAGGAACATCCAAGATCTCTGNTCCATGAAGATTGGGGTGTGGAAGGGTTACCAGTTG
GGGAAGCTCGTGTCTTTTCTTCCAATCANGGGCTCGCTCTTCTGAATATTCTTCAGGGC
AATGACATAAATTGTATATTCCGGTTCCCGGTCCAGGCCAG

16450.1.edit

TCGAGCGGCCGCCCCGGGCGAGGTCCACCACACCCAATTCTTGTGTTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCCAGAGA
AGTGGTCCCTCGGCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTACCCACCCCTGG
GTATGACACTGGAAATGGTATTGAGCTTCTCTGGCACTTCTGGTCAGCAACCCAGTGTGGG
CAACAAATGATCTTTGANGAACATGGNTTATAGCGGACCACACCGGCCACAACGGGCACC
CCCATAAGGCATAGGCCAAGAATACCCGNCGAATGTAGGACAAGAAGCTCTNTCTCAN
ACAANCATCTATGGGCCCCATTCCANGACACTTCTGAGTACATCANTTCATGGCATCCTG
GTGGCACTGATAAAAACCTTACAGTTA

16450.2.edit

AGCGTGGTCGCGGGCGAGGTCCTGTGACAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTG
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTCCGGCGGG
TATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTGGGTCCGCCTAAAA
CATGTTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTACATCCAGGGTGGGTGACGAAAGGGGTCTTTGAACTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAGTTGG
GGAAGCTCGTGTCTTTTCTTCCAATCANGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAATTGTATATTCCGNTCCCGGTCNAGCCAATAATAAACCTCTGTGACA
CCANGCGGGGCCGAAGGANCACT

FIG. 15X

16451.1
16451.2
16452.1
16452.2

16451.1.edit

AGCGTGGTCGCGGCCGAGGTCCTCACCAGAGGTACCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCATT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTANGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAATGGT
GTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCCGGC
GGCCGCTCGA

16451.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCATTTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGNTGACAGAGTTGCCACGGTAACAACCTCTCCCGAACCTTATGCCTCTGCTGGT
CTTTCAGTGCCTCCACTATGATGTTGTAGGTGGTACCTCTGGTGAGGACCTCGGCCGCGAC
CACGCT

16452.1.edit

AGCGTGGCCGCGGCCGAGGTCCATTGGCTGGAACGGCATCAACTTGAAGCCAGTGATCG
TCTCAGCCTTGGTTCTCCAGCTAATGGTGATGGNGGTCTCAGTAGCATCTGTCACACGAGC
CCTTCTTGGTGGGCTGACATTTCTCCAGAGTGGTGACAACACCTGAGCTGGTCTGCTTGT
AAAGTGTCTTAAGAGCATAGACACTCACTTCATATTTGGCGNCCACCATAAGTCCTGATA
CAACCACGGAATGACCTGTCAGGAAC

16452.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTCAGACCGGTTCTGAGTACACAGTCAGTGTGGTTGC
CTTGACGATGATATGGAGAGCCAGCCCCTGATTGGAACCCAGTCCACAGCTATTCCTGCA
CCAAGTACCTGAAGTTCACTCAGGTACACCCACAAGCCTGAGCGCCAGTGGACACCA
CCCAATGTTGAGCTCACTGGATATCGAGTGGGGTGACCCCAAGGAGAAGACCGGACCA
ATGAAAGAAATCAACCTTGCTCCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGCGG
CCACCAAATATGAAGTGAAGTGTCTATGCTCTTAAGGACACTTTGACAAGCAGACCAGCTCA
GGGTGTTGTCACCACTCTGGAGAATGTCAGCCCAAGAAAGGGCTCGTGTGACAGATGC
TACTGAGACCACCATCACCATTAGCTGGAGAACCAAGACTGAGACGATCACTGGCTTCCA
AGTTGATGCCGTTCCAGCCAATGGACCTCGGCCGCGACACGCTT

FIG. 15Y

16453.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGCCGAACTGCCAGTGTACAGGGAAGATGTACATGTTA
TAGNTCTTCTCGAAGTCCCGGGCCAGCAGCTCCACGGGGTGGTCTCCTGCCTCCAGGCGCT
TCTCATTCATGGATCTTCTTACCCGCAGCTTCTGCTTCTCAGTCAGAAGGTTGTTGTCC
TCATCCCTCTCATACAGGGTGACCAAGGACGTTCTTGAGCCAGTCCCGCATGCGCAGGGGGA
ATTGCGTCAGCTCAGAGTCCAGGCAAGGGGGGATGATTTGCAAGGCCCCGATGTAGTCCA
AGTGGAGCTTGTGGCCCTTCTTGGTGCCCTCCAAGGTGCACTTTGTGGCAAAGAAGTGGCA
GGAAGAGTCGAAGGTCTTGTGTCATTGCTGCACACCTTCTCAAACCTCGCCAATGGGGGCT
GGGCAGACCTGCCCCGGCGGCCGCTCGA

16453.2.edit

TCGAGCGGCCCGCCGGGCAGGTCTGCCAGCCCCATTGGCGAGTTTGAGAAGGNGTGCA
GCAATGACAACAAGACCTTCGACTCTTCTGCCACTTCTTTGCCACAAAGTGACCCCTGGA
GGGCACCAAGAAGGGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAAATACATCCC
CCCTTGCCTGGACTCTGAGCTGACCGAATTCCCCCTGCGCATGCGGGACTGGCTCAAGAAC
GTCCTGGTCAACCTGTATGAGAGGGATGAGGACAACAACCTTCTGACTGAGAAGCANAAG
CTGCGGGTGAAGAAATCCATGAGAATGANAAGCGCCTGNAGGCANGAGACCACCCCGT
GGAGCTGCTGGCCCCGGGACTTCGAGAAGAACTATAACATGTACATCTTCCCTGTACACTGG
CAGTTCGGCCAGACCTCGGCCGCGACCACTG

16454.1.edit

AGCGTGGNTGCGGACGACGCCCCACAAAGCCATTGTATGTAGTTTTANTTCAGCTGCAAAN
AATACCNCAGCATCCACCTTACTAACCAGCATATGCAGACA

16454.2.edit

TCGAGCGGTGCCCCGGGCAGGTCTGGGCGGATAGCACCGGGCATAATTTGGAATGGATGA
GGTCTGGCACCTGAGCAGCCCAGCGAGGACTTGGTCTTAGTTGAGCAATTTGGCTAGGA
GGATAGTATGCAGCACGGTTCTGAGTCTGTGGGATAGCTGCCATGAAGNAACCTGAAGGA
GGCGCTGGCTGGTANGGGTTGATTACAGGGCTGGGAACAGCTCGTACACTTGCCATTCTCT
GCATATACTGGNTAGTGAGGCGAGCCTGGCGCTCTTCTTTGCGCTGAGCTAAAGCTACATA
CAATGGCTTTGNGGACCTCGGCCGCGACCACTG

FIG. 15Z

16455.1.edit

TCGAGCGGCGCGCGGGCAGGTCCATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCATTGTCATGACACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGUACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCA'CCGTAGGTTGTTCAAG
CCTTCGTTGACAGAAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGT
CTTTCAAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGA
CCACGCT

16455.2.edit

AGCGTGTTTTCGGGCGAGGTCTCACCANAGGTGCCACCTACAACATCATAGTGGAGGC
ACTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGT
CAACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGNTTCCCAT
TATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGT
GCTTANGCTTTGGAAGTGGTCATTTGAGATGTGATTCTANATGGTGTGATGACAATGG
TGNGAACTACAAGATTGGAGAGAAGTGGNACCGTCAGGGGANAAAAATGGACCTGCCCGG
GCGGCNCGCTCGA

16456.1.edit

AGCGTGCTCGCGGCGGAGGTCTGGCTTCTGCTCANGTGATTATCCTGAACCATCCAGGCC
AAATAAGCGCCGGCTATGCCCTGNATTGGATTGCCACACGGCTCACATTGCATGCAAGTT
TGCTGAGCTGAAGGAAAAGATTGATC

16456.2.edit

TCGAGCGGCGCGCGGGCAGGTCCAATTGAAACAAACAGTTCTGAGACCGTTCTTCCACCA
CTGATTAAGAGTGGGGNNGCGGGTATTAGGGATAATATTCA'TTTAGCCTTCTGAGCTTCT
GGGCAGACTTGGTGACCTTGCCAGCTCCAGCAGCCTTCTGGTCCACTGCTTTGATGACACC
CACCGCAACTGTCTGTCTCATATCACGAACAGCAAAGCGACCCAAAGGTGGATAGTCTGA
GAAGCTCTCAACACACATGGGCTTGCCAGGAACCATATCAACAATGGGCAGCATCACCAG
ACTTCAAGAATTTAAGGGCCATCTTCCAGCTTTTTACCAGAACGGCGATCAATCTTTTCCTT
CAGCTCAGCAAACCTTGCATGCAATGTGAGCCG

FIG. 15AA

16459.1.edit

TCGAGCGGCCGCCCGGGCAGGTCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAG
CCTCTCCAATTGCTGGCCGCTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCAGCCTT
CCGGGAGCCACGGCTTCTTGTGGNTACAGACCCAGGGCTGACCACCAGCCTCTCACGGAG
GCATCTTATGTAACTACCTACCATTGCGCTGTGTAACACAGATTCTCCTCTGCGCTATGT
GGACATTGCCATCCCATGCAACAACAAGGGAGCTCACTCAGNNGGGTTTGATGTGGTGA
TGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTCCCGTGAACACCCATGGGANGN
CATGCTGATCTGGACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCTGN
TTGCTGANAAAGCAAGTGACCAAGGANGAAATTCANGGGTGAAANGGACTGCTCCCGCT
CCTGAATTCAGTCTACTCAACCTGANGNTGCAGACTGGTCTTGAAGGNGNACANGGGCC
CTCTGGGCCTATTAAAGCANCTTCGGTCGCGAACACGNT

16459.2.edit

AGCGTGNGTCGCGGCCGAGGTGCTGAATAGGCACAGAGGGCACCTGTACACCTTCAGACC
AGTCTGCAACCTCAGGCTGAGTAGCAGTGAACCTCAGGAGCGGGAGCAGTCCATTACCCCT
GAAATTCCTCCTTGNGCACTGCCTTCTCAGCAGCAGCCTGCTCTTCTTTTCAATCTCTTCA
GGATCTCTGTAGAAGTACAGATCAGGCATGACCTCCCATGGGTGTTACGGGAAATGGTG
CCACGCATGCGCAGAACTTCCCGAGCCAGCATCCACCACATCAAACCCACTGAGTGAGCT
CCCTTGTGTTGCATGGGATGGGCAATGTCCACATAGCGCAGAGGAGAATCTGTGTTACAC
AGCGCAATGGTAGGTAGGTAAACATAAGATGCCCTCCGCGAGAAGCTGGTGGTCAGCCCTG
GGGTCAAGTAACCACAAGAAGCCGTGGCTCCCGGAAGGCTGCCTGGATCTGGTTAGTGAA
GGNTCCAGGAGTGAAGCGGCCAACAAATTGGAGTGGCTTCAGTGGCAAGCAGCAAACCTCA
GCACAAGCCCTCTGGACCTGCCCCGCGGCCGCTCGA

16460.1.edit

TCGAGCGGCCGCCCGGGCAGGTCCATTTTCTCCTGACGGNCCCACTTCTCTCCAATCTTGT
AGTTCACACCATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTAAAGCCTGATTACAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGCCCACGGTAACAACCTCNTCCCGAACCTTATGCCTCTGCTGG
GCTTTCAGNGCCTCCACTATGATGNTGTAGGGGGGCACCTCTGGNGANGACCTCGGCCCG
GACCACGCT

16460.2.edit

AGCGTGGTCGCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGCTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCATT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAGTG
CTTANGCTTTGGAAGTGGGTCAATTCAGATGTGATTATCTAGATGGTGCCATGACAATGG
NGNGAACTACAAGATTGGAGAGAAGTGGNACCGNACGGGAGAAAATGGACCTGCCCGGG
CGGCCGCTCGA

FIG. 15BB

16461.1.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCTGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGNTGCAACCTTGGTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGCCAGAGTGGCACATCTTGAGGTACCGGCAGGTGCGGNCGGGGG
NTTTGCGGCTGCCCTCTGGNCTTCGGNTGTNCTCNATCTGCTGGCTCA

16461.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTCGCGGTGCACTGGTGATGCTGGTCCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGCCCCCTGGTCCTCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCAGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTGCTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
CAGATCGAGAACATCCGGAGCCCCAGAGGGCAGNCGCAAGAACCCCGCCCGACCTGCCGT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCA
GCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTA
CCCCACTCAGCCCAGTGTGGCCCAAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAA
GAAGCATGTCTGGTTCGGCGAGAACATGACCGATGGATTCCAGTTCGAGTATGGCGGGCA
GGGCTCCGACCCTGCCGATGGGGACCTTGCCCGCAACACGCT

16463.1.edit

AGCGTGGNNGCGGCCGAGGTATAAATATCCAGNCCATATCCTCCCTCCACACGCTGANAG
ATGAAGCTGTNCAAAGATCTCAGGGTGGANAAAACCAT

16463.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTTCAGACTTGGACTGTGTCACTGCCAGGCTTCCAG
GGCTCCAACCTTGACAGCGGCCTGTTGTGGGACAGTCTCTGTAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCATGGTTTTATCCACCCTGAGATCTTTGAACAACCTCATCT
CTCAGCGTGGGAGGGAGGCTCTGACTGGATATTTCTACCTCGGCCGCGACCACGCT

FIG. 15CC

16464.1.edit

CGAGCGGGCGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTCAG
AAGCTACACCATCACAGGTTTACAACCAGGCACTGACTACAAGANCTACCTGCACACCTTG
AATGA^{CA}AA^{TG}CTCGGAGCT^{CCCC}CTGTGGTCATCGACGCCTCCACTGCCATTGATGCACCAT
CCAACCTGCGTTTCTGGCCACCACACCAATTCTTGCTGGTATCATGGCAGCCGCCACG
TGCCAGGATTACCGGTACATCATCNAGTATGANAAGCCTGGGCCTCCTCCCAGAGAAGNG
GTCCCTCGGCCCCGCCCTGNTGTCCANAGGNTACTATTACTGNGCCNGCAACCGGCAACC
GATATCNATTTTGNCAATTGGCCTTCAACAATAATTA

16464.2.edit

AGCGTGGTTTCGCGGCCGANGTCCTGTGAGAGTGGCACTGGTAGAAGTTCAGGAACCCTG
AACTGTAAGGGTTCTTCATCAGNGCCAACAGGATGACATGAAATGATGTACTCAGAAGTG
TCCTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGNCTGTCTTTTTCC
TTCCAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTCG
GGTCCCGNTCCAGGCCAGTAATAGTANCTCTGTGACACCAGGGCGNGCCGAGGGACC
ACTTCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGTAACCGGTAATCCTGGCAC
GTGGCGGCTGCCATGATACCAGCAAGGAATTGGGGTGTGGTGGCCAGGAAACGCAGGTTG
GATGGNGCATCAATGGCAGTGGAGGCCGTGATGACCACAGGGGGAGCTCCGACATTGTC
ATTCAAGGTG

16465.1.edit

AGCGTGGNCGCGGCCGAGGTGCAGCGCGGGCTGTGCCACCTTCTGCTCTCTGCCCAACGAT
AAGGAGGGTNCCTGCCCCCAGGAGAACATTA^{ACT}NTCCCCAGCTCGGCCTCTGCCGG

16465.2.edit

TCGAGCGGCCCGCCCGGGCAGGTTTTTTTTGCTGAAAGTGGNTACTTTATTGGNTGGGAAAG
GGAGAAGCTGTGGTCAGCCCAAGAGGGAATACAGAGNCCCCGAAAAAGGGGAGGGCAGGT
GGGCTGGAACCAGACGCAGGGCCAGGCAGAACTTCTCTCCTCACTGCTCAGCCTGGTG
GTGGCTGGAGCTCANAAATTGGGAGTGACACAGGACACCTTCCCACAGCCATTGCGGCGG
CATTTCTGTGCCAGGACACTGGCTGTCCACCTGGCACTGGTCCCGACAGAAGCCCCGAGC
TGGGGAAAGTTAATGTTACCTGGGGGCAGGAACCCTCCTTATCATTGNGCAGAGAGCAG
AAGGTGGCACAGCCCCGCGCTGCACCTCGGCCGCGACCACGCT

16466.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACCATAAGTCCTGATACAACCACGGATGAGCTGTCA
GGAGCAAGGTTGATTTCTTTCATTGGTCCGNCTTCTCCTTGGGGGNCACCCGCACTCGAT
ATCCAGTGAGCTGAACATTGGGTGGCGTCCACTGGGCGCTCAGGCT

16467.2.edit

TCGAGCGGTTTCGCCCCGGGCAGGTCCACCACACCAATTCTTGCTGGTATCATGGCAGCCG
CCACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAG
AAGCGGTCCCTCGGCCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGG
AACCGAATATACAATTTATGTCAATTGNCCTGAAGAATAATCANNANAGCGANCCCTGA
TTGGAAGGA

FIG. 15DD

[illegible][illegible]

01000000	00	00000000	00	00000000	00000000
00000000	00	00000000	00	00000000	00000000
00000000	00	00000000	00	00000000	00000000
00000000	00	00000000	00	00000000	00000000

TCGAGCGGCCGCCCGGGCAGGTCTCCCTTCTTGCGGCCCAGGGGCAGCGCATAGTGGGAC
TCGTACCACTGTCCGTACGGTGTGCTGTCGATGAGCACGATGCAATTCTTACCAGGGTCT
TGGTACGAACCAGCTCGTTATTAGATGCA TTGTAGACAACATCGATGATCCTTGTTTTACG
AGTACAACACTCTGAGCCCCAGGAGAAATCCCCACGTCCAACCTCAGGGCACGGTATTTT
TTGTTACCTCCCCGCACACGGACTGTGTGGATGCGGCGGGGGCCAAGCTGACTCCTGAGGA
AGAAGAGATTTTAAACAAAAAACGATCTAAAAAAATTTCAGAAGAAATATGATGAAAGGA
AAAAAAGATGCCAAAAATCAGCAGTCTCCTGGAGGAGCAGTTCACGACAGGGCAAGCTTCTTG
CGTGCAATCGCTTCAAGGCCGGGACAGTGTGACCGAGCAGATGGCTATGTGCTAGAGGGCA
AAGAAGTGGAGTTCTATCTTAAGAAAAATCAGGGCCCAGAATGGTGNGTCTTCAACTAATC
CAAAGGGGAGTTTCAGACCAAGTGCAATCAGCAAAAACATTGATACTGNTGGCCAAATTTA
TTGGTGCAGGGCTTGACANTANGANNGGCTGGGTCTTGGGGCTTGGAATTGGNACAAGCT
TTGGCAGCCTTTTCTTTGGTTTTGCCAAAAACCTTTTGNTGAAGANGANACCTNGGGCGGA
CCCCTTAACCGATTCCACNCCNGGNGGCGTTCTANGGNCCCNCTTG

FIG. 15EE

06_16471.edit

AGCGTGGTCGCGGCCGAGGTCTGCTGCTTCAGCGAAGGGTTTCTGGCATAACCAATGATA
AGGCTGCCAAGACTGTTCCAATACCAGCACCAGAACCAGCCACTCCTACTGTTGCAGCAC
CTGCACCAATAAATTTGGCAGCAGTATCAATGTCTCTGCTGATTGCACTGGTCTGAAACTC
CCTTTGGATTAGCTGAGACACACCATTTCTGGGCCCTGATTTTCCTAAGATAGAACTCCAAC
TCTTTGCCCTCTAGCACATAGCCATCTGCTCGGTACACTGTCCCGGCCTTGAAGCGATGC
ACGCAAGAAGCTTGCCCTGCTGGAAGTCTCCTCCAGGAGACTGCTGATTTTGGCATTCTT
TTTCCTTTTCATCATATTTCTTCTGAATTTTTTTAGATCGTTTTTTGTTTAAAAATCTCTTCTCC
TCAGGAGTCAGCTTGGCCCCCGCCCATCCACACAGTCCGTGTGCGGGGAGGTAACAAGA
AATACCGTGCCCTGAGGTTGGACGTGGGGAATTTCTCCTGGGGCTCAGAGTGGTGTACTCG
TAAAACAAGGATCATCGATGGTGNCTACAATGCATCTAATAACGAGCTGGGTGCGACCCA
AAGAACCTGGNGAANAATGGATCGNCTCATCGACAGGACACCGTACCCGACAGGGGNA
CGANTCCCACTATGCGCTTGGCCCTGGGCCGCAANAAAGGAAAAGTGGCCGGCGGCCNT
CGAAAGCCCAATTNTGAAAAAATCCATCAGCTGGGNGGCCNGTCGAGCATGCATNTAN
AGGGGCCCATTTCCCTNANN

07_16472.edit

TCGAGCGGCCCGCCGGGCAGGTCCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCT
TCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCACTCAGCCAGTGTGGCCAGAG
AGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGTTCGGCGAGAGCA
TGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTGCCGATGTGGACCT
CGGCCGCGACCACGCT

08_16472.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTATGCTCTCGCCGAACCAGACATGCCTCTTGCTTGGGGTTCTTGC
TGATGTACCAAGTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGTTGGGGACCTGCCCCG
GGCGGCCGCTCGA

09_16473.edit

TCGAGCGGCCCGCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGA
AGTGGTCCCTCGGCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCTTGCCTGAAGAATAATCAGAAGAGCGAGCCCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCCTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTACCCACCCCTGG
GTATGACACTGGAAATGGTATTCAGCTTCCTGGCACTTCTGGTCAGCAACCCAGTGTGGG
CAACAAATGATCTTTGAGGAACATGGNTTTAGGCGGACCACACCGCCCAACCGGCCACC
CCCATAAGGCATAGGCCAAGACCATAACCGCCGAATGTAGGACAAGAAGCTNTNTNNTCAN
ACACCATNTNATGGGCCCCATTCCAGGACACTTCTGAGTACATCATTTATGNATCTGTGG
CACTTGATGAAAACCCCTACAGTTACAGGTTCTGGAACCTTTACCAGGCCTNTTACAGGAC
TNGGCCGACNCCTTAAGCCNATTNACCCTGGGGCGTCTANGGTCCCACTCGNNCACTG
NGAAAAATGGCTACTGTN

FIG. 15FF

11_16474.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
CGTTACAACTCCTAGGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTGCGAGGTTGTGGTGTCTGNGAACTCCNAGGACANG
AGGGCTAAATTCCATGAAGTTTGTGGATGGCCTGATGATCCACAATCGGAGACCTGTAA
CTACTACCGTCTNACCNCCTGCTGTNCNCCCCNTTCTGCTNAANACATNGGGNTNNTNC
TTGNCCNTCCTTGGGTNGAANATNNAATNGCCTNCCNTTCTANCNCTACTNGNTCCANA
NTTGGCCTTTAAANAATCCNCCTTGCCTTNNNCACTGTTCANNTNTTNNTCGTAAACCT
ATNANTTNNATTANATNNTNNNNNCTACCCCCCTCCTATTNANCCNATANGCTNNNA
ANTCCTTNNNNCTCCNCCCNNTNCTCCTNCTACTNANTNCTTCTNNCCATTACNNAGCT
CTTTCNTTTAANATAATGNGGCCNNGCTCTNCACTNCTACNATNTGNNNAATNCCCCNCC
CCNANCGNNTTTTGGCTTNNNAACCTCCTTTCCTCTCCCTNCCNAAATTNCCNANTTCC
NCNTTCCNCCNTTTCGGNTNNTCCCATNCTTCCANNCTTCANTCTANCNCNCTNCAACT
TATTTTCTNTCATCCCTTNTTCTTACANNCCCCCTNNTCTACTCNCNNTTNCATTANAT
TTGAAACTNCCACNCTANTTNCCTCCTCTACNNTTTATTTTNCGNTCCTCTACNTAAT
ANTTTAATNANTTNTCN

12_16474.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCACCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATCTTTGGGTTCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCCAGGGCAGCATGATCTTACCTTGATGCCAGCACACCCTGTCTGAG
CAACACGTGGCGCACAAGCAGTGTCAACGTAGTAAGTTAACAGGGTCTCCGCTGTGGATC
ATCAGGCCATCCACAACTTCAATGGATTTAGCCCTCTGTCTCGGAGTTTCCAGACACCA
CAACCTCGCAGCCTTTGGCCCCACTCTCCATGATGAACCGCAGCACACCATAGCAGGCCCT
CCGCACAAGCAAGCCCTCCTAAGAATTTGTAACGCANANACTCTGCTGGCAATGGCACAC
AAACCTCTAGTGGACCTCGGNCGCGACCACGC

13_16475.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGGTCCAGGATAGCCTGCGAGTCCCTCTACTGCTACTC
CAGACTTGACATCATATGAATCATACTGGGGAGAATAGTTCTGAGGACCAGTAGGGCATG
ATTCACAGATTCCAGGGGGGCCAGGAGAACCAGGGGACCCTGGTTGTCTGGAATACCAG
GGTCACCATTTCTCCAGGAATACCAGGAGGGCCTGGATCTCCCTTGGGGCCTTGAGGTCC
TTGACCATTAGGAGGGCGAGTAGGAGCAGTTGGAGGCTGTGGGCAAACTGCACAACATTC
TCCAAATGGAATTTCTGGGTGGGGCAGTCTAATTCTTGATCCGTCACATATTATGTCATCG
CAGAGAACGGATCCTGAGTCACAGACACATATTTGGCATGGTTCTGGCTTCCAGACATCTC
TATCCGNCATAGGACTGACCAAGATGGGAACATCCTCCTTCAACAAGCTTNTGTTGTGCC
AAAAATAATAGTGGGATGAAGCAGACCGAGAAGTANCCAGCTCCCCCTTTTGCACAAAGC
NTCATCATGTCTAAATATCAGACATGAGACTTCTTTGGGCAAAAAAGGAGAAAAAGAAAA
AGCAGTTCAAAGTANCCNCCATCAAGTTGGTTCTTGGCCNTTACGACCCGGGCCCCGTT
ATAAAACACCTNGGGCCGGACCCCTT

FIG. 15GG

14_16475.edit

AGCGTGGTCGCGGCCGAGGTGTTTTATGACGGGCCCCGGTGCTGAAGGGCAGGGAACAAC
TGATGGTGCTACTTTGAACTGCTTTTCTTTCTCCTTTTGCACAAAGAGTCTCATGTCTGA
TATTTAGACATGATGAGCTTTGTGCAAAAGGGGAGCTGGCTACTTCTCGCTCTGCTTCATC
CCACTATTATTTTGGCACAACAGGAAGCTGTTGAAGGAGGATGTTCCCATCTTGGTCAGTC
CTATGCGGATAGAGATGTCTGGAAGCCAGAACCATGCCAAATATGTGTCTGTGACTCAGG
ATCCGTTCTCTGCGATGACATAATATGTGACGATCAAGAATTAGACTGCCCCAACCCAGAA
ATTCCATTTGGAGAATGTTGTGCAGTTTGGCCACAGCCTCCAACCTGCTCCTACTCGCCCTCC
TAATGGTCAAGGACCTCAAGGCCCCAAGGGAGATCCAGGCCCTCCTGGTATTCTGGGAG
AAATGGTGACCCTGGTATTCCAGGACAACCAGGGTCCCCTGGTTCTCCTGGCCCCCTGGA
ATCNGGNGAATCATGCCCTACTGGTCTCAAACCTATTCTCCANATGATTCATATGATGTC
AAGTCTGGGATAGCNAGTANGGANGGACTCGCAGGCTATTCTGGACCANACCTGCCGGGG
GGGCGTTTCAAAGCCCCGAATCTGCANANNNTNCNTTCACTGGCGGCCGTCGAGCTGCTTT
AAAAGGGCCATTCCNCCTTTAGNGNGGGGGANTACAATTACTNGGCGGCGTTTANANCG
CGNGNCTGGGAAAT

15_16476.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTGGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTGATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGGGGT
TCTTGGCGGCTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTGGCTCAGGCTCTTGAGGGTG
GTGTCCACCTCGAGGTACGGTCACGAACCACATTGGCATCATCAGCCCGGTAGTAGCGGC
CACCATCGTGAGCCTTCTCTTGANGTGGCTGGGGCAGGAAGTGAAGTCGAAACCAGCGCT
GGGAGGACCAGGGGGACCAANAGGTCCAGGAAGGGCCCCGGGGGGACCAACAGGACCAG
CATCACCAAGTGCGACCCGCGAGAACCTGCCCCGCCGNCCTGCTCGAA

16_16476.edit

TCGAGCGNNCGCCCCGGGCAGGTCTCGCGGTGCGACTGGTGATGCTGGTCCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGTCCCCCTGGTCTCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTCGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
CAGATCGAGAACATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGCCGACCTGCCGT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAA
GGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGT
ACCCCACTCAGCCCAGTGTGGCCGAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACA
AGAGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCC
AGGGCTCCCAACCTGCCGATGTGGACCTCCGGCCGCGACCAACCTT

FIG. 15HH

17_16477.edit

TNGAGCGGCCGCCCCGGGCAGGNTGNNAACGCTGGTCCTGCTGGTCCTCCTGGCAAGGCTG
GTGAAGATGGTCACCCTGGAAAACCCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCAC
AGGGTGCTCGTGGTTTCCCTGGAACTCCTGGACTTCCTGGCTTCAAAGGCATTAGGGGACA
CAATGGTCTGGATGGATTGAAGGACAGCCCGGTCTCCTGGTGTGAAGGGTGAACCTGG
TGCCCCCTGGTGAAAATGGAATCCAGGTCAAACAGGAGCCCGTGGGCTTCCTGGTGAGAG
AGGACCGTGTGGTGCCCCGGCCANACCTCGGCCGCGACCACGCTAAGCCCGAATTTCC
AGCACACTGGNNGGCCGTTACTANTGGAATCCGAGCTCGGTACCAAGCTTGGCGTAATCATG
GTCATAGCTGTTTCTGNGTGAAATTGTTATCCGCTCACAATTTACACANCATACGAAGC
CGGAAAGCATAAAGTGTAAGCCTTGGGGTGCTAATGAGTGAGCTAACTCNCATTAAATT
GCGTTGCGCTCACTGCCCGCTTTTCCANNNGGAAAACNTGGCNTNGCCNGCTTGCNTTAA
NTGAAATCCGCCNACCCCCGGGGAAAAGNCGGTTTGCGTATTGGGGCNCCTTTTCCCTTT
CCTCGGNTTACTTGANTTANTGGGCTTTGGNCGNTTCGGGTTGNGGCGANCNGGTTCAACN
TCACNCCAAAGGNGGNAANACGGTTTTCCANAATCCGGGGGNTANCCCAANGNAAAAC
ATNNGNCNAANGGGCT

18_16477.edit

AGCGTGGTTNGCGGCCGAGGTCTGGGCCAGGGGCACCAACACGTCCTCTCTCACCAGGAA
GCCACGGGCTCCTGTTTGACCTGGAGTTCCATTTTACCAGGGGCACCAGGTTACCCCTT
CACACCAGGAGCACCAGGCTGTCCCTTCAATCCATNCAGACCAATTGTGNCCCCTAATGCCT
TTGAAGCCAGGAAGTCCAGGAGTTCCAGGGAAACACCGAGCACCTGTGGTCCAACAAC
TCCTCTCTCACCAGGTGCTCCGGGTTTTCCAGGGTGACCATCTTCACCAGCCTTGCCAGGA
GGACCAGCAGGACCAGCGTTACCAACCTGCCCGGGCGGCCGCTCGA

21_16479.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTACACCAATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGTC
TTTCAGTGCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACC
ACGCT

22_16479.edit

AGCGTGGTCGCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTAGGCTTTGGAAGTGGTCATTTCAAGATGTGATTATCTAGATGGTGCCATGACAATGG
TGTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGG
CCGGCCGCTCGA

FIG. 15H

24_16480.edit

TCGAGCGNNCGCCCGGGCAGGTCCAGTAGTGCCTTCGGGACTGGGTTACCCCCAGGTCTG
CGGCAGTTGTCACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCA
CCGAGATATTCCTTCTGCCACTGTTCTCCTACGTGGTATGTCTTCCCATCATCGTAACACGT
TGCCTCATGAGGGTCACACTTGAATTCTCCTTTTCGGTTCCCAAGACATGTGCAGCTCATTT
GGCTGGCTCTATAGTTTGGGGAAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCCTCCT
TCTCTACTGGAGCTTTCGTACCTTCCACTTCTGCTGTTGGTAAAAATGGTGGATCTTCTATCA
ATTTCAATTGACAGTACCCACTTCTCCCAAACATCCAGGGAAATAGTGATTCAGAGCGATT
AGGAGAACCAAATTATGGGGCAGAAATAAGGGGGCTTTCCACAGGTTTTCTTTGGAGGA
AGATTTTCAGTGGTGACTTTAAAAGAATACTCAACAGTGTCTTCATCCCCATAGCAAAAAGAA
GAAACNGTAAATGATGGAANGCTTCTGGAGATGCCNNCATTAAAGGGACNCCCAGAACTT
CACCATCTACAGGACCTACTTCAGTTTACANNAAGNCACATANTCTGACTCANAAAGGAC
CCAAGTAGCNCCATGGNCAGCACTTTNAGCCTTTCCCCTGGGGAAAANNTTACNTTCTTAA
ANCCTNGGCCNNGACCCCTTAAGNCCAAATTTNTGGAAAANTTCCNTNCCNNCTGGGGGGC
NGTTCNACATGCNTTTNAAGGGCCCAATTNCCCCNT

25_16481.edit

TCGAGCGGCCCGCCCGGGCAGGTGTCGGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCATTTGCTCTCCCACTCCACGGCGATGTGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTCAGGCTGACCTGGTTCTTGGTCATCTCCTCCCGGATGGGGGCAGGGTGTAC
ACCTGTGGTTCTCGGGGCTGCCCTTTGGCTTTGGAGATGGTTTTCTCGATGGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCACTTGTACTCCTTGCCATTGAGCCAGTCTGGTGCAGGAC
GGTGAGGACGCTGACCACACGGTACGTGCTGTTGTACTGCTCCTCCCGCGGCTTTGTCTTG
GCATTATGCACCTCCACGCGTCCACGTACCAGTTGAACTTGACCTCAGGGTCTTCGTGGC
TCACGTCCACCACCACGCATGTAACCTCAGACCTCGGCCGCGACCACGCT

26_16481.edit

AGCGTGGTTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGCGTCCTCACCCTCCTGCA
CCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCCCTCCCAGC
CCCCATCGAGAAAAACATCTCCAAAGCCAAAGGGCAAGCCCCGAGAACCACAGGTGTACA
CCCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTGACCTGACCTGCCTGGTCA
AAGGCTTCTATCCCAGCGACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACA
ACTACAAGACCACGCCTCCCGTGTGGACTCCGACACCTGCCCGGGCGGCCGCTCGA

27_16482.edit

TCGAGCGGCCCGCCCGGGCAGGTTGAATGGCTCCTCGCTGACCACCCGGTGTGGTGGTGG
GTACAGAGCTCCGATGGGTGAAACCATTGACATAGAGACTGTCCCTGTCCAGGGTGTAGG
GGCCAGCTCAGTGATGCCGTGGGTGAGCTGGCTCAGCTTCCAGTACAGCCGCTCTCTGTC
CAGTCCAGGGCTTTTGGGGTCAGGACGATGGGTGCAGACAGCATCCACTCTGGTGGCTGC
CCCATCCTTCTCAGGCCTGAGCAAGGTGAGTCTGCAACCAGAGTACAGAGAGCTGACACT
GGTGTCTTGAACAAGGGCATAGCAGACCCTGAAGGACACCTCGGCCGCGACCACGCT

FIG. 15JJ

28_16482.edit

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAG
TGTCAGCTCTCTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCTGACCCCAAAGCCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCCGGCGGCCGCTCGA

29_16483.edit

AGCGTGGTCGCGGCCGAGGTCTGTCAGAGTGGCACTGGTAGAAGTTCAGGAACCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTCCGGCGG
TATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTGTGGTCCGCCTAAAC
CATGTTCTCAAAGATCATTTGTTGCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCAGTGTCTATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGAAGGGTTACCAGTTGG
GGAAGCTCGTCTGTCTTTTCTTCCAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAATTGTATATTCGGTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACAC
CAGGGCGGGGCCGAGGGACCCCTCTNTTGAAGAGACCAGCTTCTCATACTTGATGATGA
GNCCGGTAATCCTGGCACGTGGNGGTTGCATGATNCCACCAAGGAAATNGGNGGGGGNG
GACCTGCCCGGGCGGCCGTTNAAAGCCCAATTCCACACACTTGGNGGCCGTAATATGGATC
CCTCNGTCCAACCTTGGNGGAATATGGCATAACTTTT

31_16484.edit

TCGAGCGGCCGCCCCGGGCAGGTCTTGACCTTTTCAGCAAGTGGGAAGGTGTAATCCGTCT
CCACAGACAAGGCCAGGACTCGTTTGTACCCGTTGATGATAGAATGGGGTACTGATGCAA
CAGTTGGGTAGCCAATCTGCAGACAGACACTGGCAACATTGCGGACACCCTCCAGGAAGC
GAGAATGCAGAGTTTCTCTGTGATATCAAGCACTTCAGGGTTGTAGATGCTGCCATTGTC
GAACACCTGCTGGATGACCAGCCCAAAGGAGAAGGGGGAGATGTTGAGCATGTTTCAGCAG
CGTGGCTTCGCTGGCTCCCACTTTGTCTCCAGTCTTGATCAGACCTCGGCCGCGACCACGCT

37_16487.edit

AGCGTGGTCGCGGCCGAGGTCTGTCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTG
GTGACCGTGCCCTCCAGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGC
CCAGCAACACCAAGGTGGACAAGAGAGTTGAGCCCAAATCTTGTGACAAAACCTCACACAT
GCCCACCGTGCCAGCACCTGAACCTCTGGGGGACCGTCAGTCTTCTCTTCCCCCGCAT
CCCCCTTCCAAACCTGCCCCGGGCGGCCGCTCG

FIG. 15KK

38_16487.edit

CGAGCGGCCGCCCGGGCAGGTTTGAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGT
CCCCCAGGAGTTCAGGTGCTGGGCACGGTGGGCATGTGTGAGTTTGTCAAGATTGG
GCTCAACTCTCTTGTCCACCTTGGTGTGCTGGGCTTGTGATCTACGTTGCAGGTGTAGGTC
TGGGTGCCGAAGTTGCTGGAGGGCACGGTCAACCGCTGCTGAGGGAGTAGAGTCCTGAG
GACTGTAGGACAGACCTCGGCCGCGACACGCT

39_16488.edit

NGGNNGGTCCGGNCNGNCAGGACCACTCNTCTTCGAAATA

41_16489.edit

AGCGTGGTCGCGGCCGAGGTCCTCACTTGCTCCTGCAAAGCACCGATAGCTGCGCTCTGG
AAGCGCAGATCTGTTTTAAAGTCCTGAGCAATTTCTCGCACCAGACGCTGGAAGGGAAATT
TGCGAATCAGAAGTTCAGTGGAAGTCTGATAACGTCTAATTTACGGAGCGCCACAGTACC
AGGACCTGCCCCGGCGGCCGCTCGA

42_16489.edit

TCGAGCGGCCGCCCGGGCAGGTCCTGGTACTGNGGCGCTCCGTGAAATTAGACGTTATCA
GAAGTCCACTGAACTTCTGATTGCGAACTTCCCTTCCAGCGTCTGGTGCGAGAAATTGCT
CAGGACTTTAAAACAGATCTGCGCTTCCAGAGCGCAGCTATCGGTGCTTTGCAGGAGGCA
AGTGAGGACCTCGGCCGCGACACGCT

45_16491.edit

TCGAGCGGCCGCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCT
TGCTGATGTACCAAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACACGCT

FIG. 15LL

46_16491.edit

GTGGGNTTGAACCCNTTTNANCTCCGCTTGGTACCGAGCTCGGATCCACTAGTAACGGCCG
CCAGTGTGCTGGAATTCGGCTTAGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGCAC
CTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCC
CAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGAC
CTGCGTGTACCCCACTCAGCCAGTGTGGUCCAGAAGAACTGGTACATCAGCAAGAACCC
CAAGGACAAGAGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTA
TGGCGGCCAGGGCTCCGACCTGCCGATGTGGACCTGCCCCGGCGGCCGCTCGA

47_16492.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTCAAGGACAACAGCATTAGTGTA
AGTGGCTGCCTTCAAGTTCCCCTGTTACTGGTTACAGAGTAACCACCACTCCCAAAAATGG
ACCAGGACCAACAAAACTAAAACTGCAGGTCCAGATCAAACAGAAATGACTATTGAAG
GCTTGACGCCACAGTGGAGTATGTGGTTAAGTGTCTATGCTCAGAATCCAAGCGGAGAG
AAGTCAGCCTCTGGTTCAGACTGNAAGTAACCAACATTGATCGCCTAAAGGACTGGCATTG
ACTGATGNGGATGCCGATTCCATCAAATTTGNTTGGGAAAACCCACAGGGGCAAGTTTNC
ANGTCNAGGNGGACCTACTCGAGCCCTGAGGATGGAATCCTTGACTNTTCTTNNCCTGAT
GGGGAAAAAAAACCTTNAAACTTGAAGGACCTGCCCCGGCGGCCGTNCAAAACCCAATT
CCACCCCTTGGGGGCGTCTATGGGNCCCACTCGGACCAAACTTGGGGTAAN

48_16492.edit

TCGAGCGGCCGCCCCGGCAGGTCTTGCAGCTCTGCAGTGTCTTCTTACCATCAGGTGCA
GGGAATAGCTCATGGATTCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAACTT
GCCCCGTGTTGGCTTTCCCAAGCAATTTTGATGGAATCGGCATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTACTGCAGTCTGAACCAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTGCAGTTTTAGTTTTTGTGGTCTGCTCCATTTTTGGGAGTG
GTGGTTACTCTGTAACCAGTAACAGGGGAACCTTGAAGGCAGCCACTTGACACTAATGCTGT
TGTCTGAACATCGGTCACTTGATCTGGGATGGTTTGTCAATTTCTGTTCCGTAATTAATG
GAAATTGGCTTGCTGCTTGCGGGGCTTGTCTCCACGGCCAGTGACAGCATACACAGTGATG
GTATAATCAACTCCAGGTTTAAGCCGCTGATGGTAGCTGAAACTTTGCTCCAGGCACAAGT
GAACTCCTGACAGGGCTATTTCTNCTGTTCTCCGTAAGTGATCCTGTAATATCTCACTGGG
ACAGCAGGANGCATTCCAAAACCTCGGGCGNGACCCCTAAGCCGAATTNTGCAATATNC
ATCACTGGCGGGCGCTCGANCATTCAAAGGCCCAATCNCCCCTATAGGGAGTNT
ANTACAATTNG

FIG. 15MM

49_16493.edit

TCGAGCGGCCCGCCCGGGCAGGTCACTTTTGGTTTTTGGTCATGTTTCGGTTGGTCAAAGATA
AAAACCTAAGTTTGAGAGATGAATGCAAAGGAAAAAATATTTTCAAAGTCCATGTGAAA
TTGTCTCCCATTTTTTGGCTTTTGAGGGGGTTCAGTTTGGGTGCTTGTCTGTTTCCGGGT
GGGGGAAAGTTGGTTGGGTGGGAGGGAGCCAGGTGGGATGGAGGGAGTTTACAGGAA
GCAGACAGGGCCAACGTCC

55_16496.edit

AGCGTGGTCGCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTAGGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAATGGT
GTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAAATGGACCTGCCCGGGC
GGCCGCTCGA

56_16496.edit

TCGAGCGGCCCGCCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCATTTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGCCACGGTAACAACCTCTCCCGAACCTTATGCCTCTGCTGGTC
TTTCAGTGCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACC
ACGCT

59_16498.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACCATAAGTCCTGATACAACCACGGATGAGCTGTCA
GGAGCAAGGTTGATTTCTTTCAATTGGTCCGGTCTTCTCCTTGGGGGTACCCGCACTCGATA
TCCAGTGAGCTGAACATTGGGTGGTGCTCACTGGGCGCTCAGGCTTGTGGGTGTGACCTGA
GTGAACTTCAGGTCAGTTGGTGCAGGAATAGTGGTTACTGCAGTCTGAACCAAGAGGCTGA
CTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGC
CTTCAATAGTCATTTCTGTTTGTCTGGACCTGCAGTTTTAGTTTTTGTGGTCTGGTCCAT
TTTTGGGAGTGGTGGTTACTCTGTAACCAGTAACAGGGGAACCTGAAGGCAGCCACTTGAC
ACTAATGCTGTTGTCTGAACATCGGTCACTTGCATCTGGGATGGTTTGNCAATTTCTGTTT
GGTAATTAATGGAAATTGGCTTGCTGCTTGCAGGGCTGTCTCCACGGCCAGTGACAGCATA
CACAGNGATGGNATNATCAACTCCAAGTTTAAGGCCCTGATGGTAACTTTAAACTTGCTCC
CAGCCAGNGAACTCCGGACAGGGTATTTCTTCTGGTTTTCCGAAAGNGANCCTGGAATNN
TCTCCTTGGANCAGAAGGANCNTCCAAAACCTTGGGCCGGAACCCCTT

FIG. 15NN

60_16473.edit

AGCGTGGTCGCGGCCGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTGGCGGG
TATGGTCTTGGCCTATGCCCTTATGGGGGTGGCGTTGTGGGCGGTGTGGTCCGCCTAAAC
CATGTTCTCAAAGATCATTTGTGCCCAACACTGGGTGCTGACCAGAAAGTGGCAGGAAG
CTGAATACCATTTCCAGTGTACATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTTCCTTCCAATCAGGGGCTCGCTCTTCTGATTATCTTCAGGGC
AATGACATAAATTGTATATTCGGTTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTTGTGAC
ACCAGGCGGGGGCCANGGACCACTTCTCTGGGANGAGACCCAGCTTCTCATACTTGATGAT
GTAACCCGGTAATCCTGCACGTGGCGGCTGNCATGATACCANCAAGGAATTGGGTGNGGN
GGACCTGCCCCGGCGGCCCTCNA

60_16498.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATTAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTACAGGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGTTCCCTGTTACTGGTTACAGAGTAACCACCACTCCAAAAATGG
ACCAGGACCAACAAAACTAAAACTGCAGGTCCAGATCAAACAGAAATGACTATTGAAG
GCTTGACAGCCACAGTGGAGTATGTGGTTAGTGTCTATGCTCAGAATCCAAGCGGAGAGA
GTCAGCCTCTGGTTCAGACTGCAGTAACCACTATTCTGCACCAACTGACCTGAAAGTTCAC
TCAGGTACACCCACAAGCCTGAGCCGCCAGTGGACACCACCAATGTTCACTCACTGGAT
ATCGAGTGGGGTGACCCCCAAGGAGAAAGACCCGACCCATGAAAGAAATCAACCTTGCT
CCTGACAGCTCATCCGNGGGGTGTATCAGGACTTATGGGGGACTGCCCCGGCNGGCCGNTC
GAAANCGAATTNTGAAATTTCTTCNCACCTGGNGGCGNTTCGAGCTTNTNTANANGGC
CCAAATTCNCCTNTAGNGGGTCGTN

61_16499.edit

AGCGTGGTCGCGGCCGAGGTCTNAGGA

62_16483.edit

TCGAGCGGCCCGCCGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCCAGAGA
AGTGGTCCCTCGGCCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCAATGCCCTGAAGAATAATCAGAAGAGCGAGCCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTCACCCACCTGG
GTATGACACTGGAAATGGTATTCAGCTTCTGGAAGTCTGAGCAACCCAGTGTGGG
CAACAAATGATCTTTGAGGAACATGGTTTTAGGCGGACCACACCGCCCAACACGGGCACC
CCCATAAGGNATAGGCCAAGACCATACCCCGCCGAATGTAGGACAAGAAGCTCTNTCTCA
ACAACCATCTCATGGGCCCCATTCCAGGACACTTCTGAGTACATCATTTATGTCATCCTG
GTGGGCACTTGATGAANAACCTTACAGTTCAGGGTTCCTGGAAGTCTTACCAGNGCCACT
TCTGACAGGANCTTGGGCGNGACCACTT

FIG. 1500

63_16500.edit

AGCGTGGTCGCGGCCGAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAG
TTCACACCATTGTTCATGGCACCATTAGATGAATCACATCTGAAATGACCACTTCCAAAGC
CTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCAAC
GGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAGCC
TTCGTTGACAGAGTTGCCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGTCTT
TCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTGCCCCGGGCGGCC
GCTCGA

64_16493.edit

AGCGTGGTCGCGGCCGAGGTGTGCCCCAGACCAGGAATTCGGCTTCGACGTTGGCCCTGTC
TGCTTCCTGTAACTCCCTCCATCCCAACCTGGCTCCCTCCCAACCACTTTCCCCC
AACCCGAAACAGACAAGCAACCCAACTGAACCCCTCAAAAGCCAAAAAATGGGAG
ACAATTCACATGGACTTTGGAAAATATTTTTTCTTTGCATTCATCTCTCAAACTTAGTT
TTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTGACCTGCCCCGGGCGGCCGCTC
GA

64_16500.edit

TCGAGCGGCCCGCCGGGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGG
CACTGAAAGACCAGCAGAGGCATAAGGTTGCGGAAGAGGTTGTTACCGTGGGCAACTCTG
TCAACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCA
TTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAG
TGCTTAGGCTTTGGAAGTGGTCAATTCAGATGTGATTATCTAGATGGTGCCATGACAATG
GTGTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTCGGCCG
CGACCACGCT

FIG. 15PP

16501.edit

TCGAGCGGCCGCCCCGGGCAGGTACCGGGGTGGTCAGCGAGGAGCCATTACACTGAACTT
CACCATCAACAACCTGCGGTATGAGGAGAACATGCAGCACCTGGCTCCAGGAAGTTCAA
CACCACGGAGAGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCACCAGTGTGGC
CCTCTGTA CTCTGGCTGCAGACTGACTTTGCTCAGACCTGAGAAACATGGGGCAGCCACTG
GAGTGGACGCCATCTGCACCCTCCGCTTGATCCCACTGGTNCTGGACTGGACANANAGCG
GCTATACTGGGAGCTGANCCNAACCTTTGGCGGNGACNCCNCTT

16501.2.edit

GAGGACTGGCTCAGCTCCCAGTATAGCCGCTCTCTGTCCAGTCCAGGACCAGTGGGATCAA
GGCGGAGGGTGCAGATGGCGTCCACTCCAGTGGCTGCCCCATGTTTCTCAAGTCTGAGCAA
AGNCAGTCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGCTCTTGAACAGGGACCTGAG
CAGGCCCTGAAGGACCCTCTCCGTGGTGTTGAACTTCCTGGAGCCAGGGTGCTGCATGTC
TCCTCATACCGCAGGTTGTTGATGGTGAAGTTCAGTGTGAATGGCTCCTCGCTGACCACCC

16502.1.edit

AGCGTGGTCGCGGCCGAGGTCCACCACACCCAATTCTTGCTGGTATCATGGCAGCCGCCA
CGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAA
GTGGTCCCTCGGCCCCGCCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGAA
CCGAATATACAATTTATGTCAATTGCCCTGAAGAATAATCAGAAGAGCGAGCCCCCTGATTGG
AAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCCTCCACACCCCAATCTTCATGG
ACCANANANCTTGGATNGTCCTTTCACNGGTTNAAAAAACCCCTTTTCGCCCCCCCCACCTTG
GGGATTAACCTTGGGAAANGGGGATTNACCNTTCC

16502.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGTGAGAGTGGCACTGGTAGAAGTTCCAGGAACCTT
GAACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGT
GTCCTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGCTCCTACATTCCGC
GGGTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTGTGGTCCGCCTAA
AACCATGTTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCAGAAGTGCCAGG
AAGCTGAATACCATTTCAGTGTATACCCAGGGNGGGTGACCAAAGGGGGTCNTTTNGA
CCTGGNGAAAGGAACCATCCAAAANCTCTGNCCCATG

FIG. 15QQ

16503.1.edit

AGCGTGGNCGCGGCCGAGGTCTGAGGATGTAACTCTTCCCAGGGGAAGGCTGAAGTGCT
GACCATGGTGCTACTGGGTCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGT
ACTGTAGATGGTGAAGTCTGGGTGTCCTAAATGCTGCATCTCCAGAGCCTTCCATCATT
CCGTTTCTTCTTTGCTATGGGATGAGACACTGTTGAGTATTCTCTAAAGTCACCACTGAAA
TCTTCTCCAAAGGAAAACCTGTGAAAAAGCCCCATTATTCTGCCCCATAATTTGGTCTCTCC
TAATCCTCTGAAATCACTATTTCCCTGGAANGTTTGGGAAAAANNGGGCNACCTGNCAN
TGGAAANTGGATANAAAGATCCCACCATTTTACCCAACNAGCAGAAAGTGGGAANGGTAC
CGAAAAGCTCCAAGTAANAAAAAGGAGGGAAGTAAAGGTCAAGTGGGCACCAAGTTTCAA
ACAAAACCTTCCCCAACTATANAACCCA

16503.2.edit

AAGCGGCCGCCCCGGGCAGGNNCAGNAGTGCCCTTCGGGACTGGGNTCACCCCCAGGTCTGC
GGCAGTTGTACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCAC
CGAGATATTCTTCTGCCACTGTTCTCTACGTGGTATGTCTTCCCATCATCGTAACACGTT
GCCTCATGAGGGTCACACTTGAATTCTCCTTTTCCGTTCCCAAGACATGTGCAGCTCATTTG
GCTGGCTCTATAGTTTGGGGAAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCTCCTT
CTCTACTGGAGCTTTCCGTACCTTCCACTTCTGCTGNTGGNAAAAAGGGNGGAACNTCTTA
TCAATTTATTGGACAGTANCCNCTTTCTNCCCAAAACATNCAAGGGAAAATATTGATTN
CNAGAGCGGATTAAGGAACAACCCNAATTATGGGGGCCAGAAATAAAGGGGGCTTTTCCA
CAGGTNTTTTCT

16504.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCAGGCTATTGTAAGTGTCTGAGCACATATGAGAT
AACCTGGGCCAAGCTATGATGTTTCGATACGTTAGGTGTATTAATGCACTTTGACTGCCA
TCTCAGTGGATGACAGCCTTCTCACTGACAGCAGAGATCTTCTCACTGTGCCAGTGGGCA
GGAGAAAGAGCATGCTGCGACTGGACCTCGGCCGCGACCAAGCT

16504.2.edit

AGCGTGGTTCGCGGCCGAGGTCCAGTTCGAGCATGCTCTTTCTCCTGCCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTGAGTGAAGGCTGTCATCCACTGAGATGGCAGTCAAAAGTGC
ATTTAATACACCTAACGTATCGAACATCATAGCTTGGCCCAGGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCTGCAGACCTGCCCCGGCGGCCGCTCGA

16505.1.edit

CGAGCGGCGCGCGGCGAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAG
AAGCTACACCATCACAGGTTTACAACCAGGCACTGACTACAAGATCTACCTGTACACCTTG
AATGACAATGCTCGGAGCTCCCCTGTGGTTCATCGACGCCTCCACTGCCATTGATGCACCAT
CCAACCTGCGTTTCCTGGCCACCAACCCCAATTCCTTGCTGGTATCATGGCAGCCGCCACG
TGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCCAGAGAAAT
GGTCCCTCGGCGCGCGCTGGTGNACAGAAGCTACTATTACTGGCCTGGAACCGGGAACC
GAATATACAATTTATGTCATTGCCCTGAAGAATAATCANAAGAGCGAGCCCCTGATTGGA
AGG

16505.2.edit

AGCGTGGTCGCGGCGCGAGGTCTGTGAGAGTGGCACTGGTAGAAGTTCAGGAACCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGT
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGCTCTTTTCTCTC
CAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTCGGTT
CCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCCGAGGGACCACT
TCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGTANCCGGTAATCCTGGCACCGT
GGCGGCTGCCATGATACCAGCAAGGAATTGGGTGTGGTGGCCAAGAAACGCAGGTTGGAT
GGTGATCAATGGCAGTGGAGGCGTCGATNACCACAGGGGAGCTCCGANCAATTGTCATT
AAGGTGGACAGGTAGAATCTTGTAATCAGGTGCCTGGTTTGTAACCTG

16506.1.edit

TCGAGCGGCGCGCGGCGAGGTTTCGTGACCGTGACCTCGAGGTGGACACCACCCTCAAG
AGCCTGAGCCAGCAGATCGAGAACATCCGGAGCCAGAGGGCAGCCGCAAGAACCCCGC
CCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGT
GAGACCTGCGTGTAACCCACTCAGCCAGTGTGGCCAGAGAAGTGGTACATCAGCAAG
AACCCCAAGGACAAGAAGCATGTCTGGTTCCGGCGAAAGCATGACCGATGGATTCCAGTTC
GAGTATGGCGGCCAGGGCTCCGACCCTGCCGATGTGGACCTCGGCCGCGACACGCTAAG
CCCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGGATCCGAGCTTCGGTACCAAGCTTG
GCGTAATCATGGGNCATAGCTGTTTCTGNGTGAAAATGGTATTCCGCTTCACAATTTCCC
AC

16506.2.edit

AGCGTGGTCGCGGCGCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGCTCTTGGGGTTCTTG
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGGGGT
TCTTGCGGCTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTGGCTCAAGCTCTTGAAGGGT
GGTGTCCACCTCGAGGTACGGTCACGAAACCTGCCCCGGGCGGCCGCTCGA

FIG. 15SS

16507.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGACCTGCCGTGACCTCAAGATGTGC
CACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGAT
GCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCA
GTGTGCCCCAGAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGT
TCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCCTG
CCGATGTGGACCTGCCCGNGCCGNCCTCGAAAAGCCCAATTTCCAGNCACACTTGG
CCGGCCGTTACTACTG

16507.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCAATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGCTCTTGGGGTTCT
TGCTGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTCACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACACGCT

16508.1.edit

CGAGCGGCCCGCCCGGGCAGGTCCCCCCCCCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTT

16508.2.edit

AGCGTGGTCGCGGCCGAGGTCTGGCATTCCTTCGACTTCTCTCCAGCCGAGCTTCCCAGAA
CATCACATATCACTGCAAAAATAGCATTGCATACATGGATCAGGCCAGTGGAAATGTAAA
GAAGGCCCTGAAGCTGATGGGGTCAAATGAAGGTGAATTCAAGGCTGAAGGAAATAGCA
AATTCACCTACACAGTTCTGGAGGATGGTTGCACGAAACACACTGGGGAATGGAGCAAAA
CAGTCTTTGAATATCGAACACGCAAGGCTGTGAGACTACCTATTGTAGATATTGCACCCTA
TGACATTGGTGGTCCTGATCAAGAATTTGGTGTGGACGTTGGCCCTGTTGCTTTTTATAAA
CCAAACTCTATCTGAAATCCCAACAAAAAATTTAACTCCATATGTGNTCCTCTTGTCT
AATCTTGGCAACCAGTGCAAGTGACCGACAAAATTCAGTTATTTATTTCCAAAATGTTTG
GAAACAGTATAATTTGACAAAAGAAAAAGGATACTTCTTTTTTTGGCTGGTCCACCAAA
TACAATTCAAAAGGCTTTTTGGTTTTATTTTTANCCAATTCCAATTTCAAATGTCTCAA
TGGNGCTTATAATAAAATAAACTTTCACCCTTNTTTTNGAT

FIG. 15TT

16509.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATTAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTTACAGGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGTTCCCTGTACTGGTTACAGAAGTAACCACCACTCCCAAAATG
GACCAGGACCAACAAAACTAAACTGCAGGTCCAGATCAAACAGAAAAATGGACTATTG
AAGGCTTGACGCCACAGTGGAAAGTATGTGGNTAGGNGTCTATGCTCAGAAATCCCAAGCC
GGAGAAAGTCAGCCTTCTGGTTTAGACTGCAGTAACCAACATTGATCGCCCTAAAGGACT
GGNCATTCACTTGGATGGTGGATGTCCAATTC

16509.2.edit

TCGAGCGGCCCGCCCGGCCAGGTCTTGCAGCTCTGCAGNGTCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCTGTACCTGGAACTT
GCCCCGTGTGGGCTTTCCCAAGCAATTTTATGGAATCGACATCCACATCAGNGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCAGTCTGAACCAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTGCAGTTTTAAGTTTTTGGTGGTCTGNCCCATTTTGGGAAG
TGGGGGGTTACTCTGTAACCAGTAACAGGGGAAGTTGAAGGCAGCCACTTGACACTAATG
CTGTTGCTCTGAACATCGGTCACTTGCATCTGGGGATGGTTTGAACAATTTCTGGTTCGGCA
AATTAATGGAAATTGGCTTGCTGCTTGGCGGGGCTGNCTCCACGGGCCAGTGACAGCATA
C

16510.1.edit

TCGAGCGGCCCGCCCGGCCAGGTCTTGCAGCTCTGCAGTGTCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCTGTACCTGGAACTT
GCCCCGTGTGGGCTTTCCCAAGCAATTTTATGGAATCGACATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCAGTCTGAACCAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTGCAGTTTTAAGTTTTTGTGGNCTGNCCATTTTGGGGAA
GGGGTGGTTACTCTTGTAAACAGTAACAGGGGAAGTTGAAGCAGCCACTTGACACTAATG
CTGGTGGCCTGAACATCGGTCACTTGCATCTGGGATGGTTTGGTCAATTTCTGTTCCGTAAT
TAATGGGAAATTGGCTTACTGGCTTGCGGGGGCTGTCTCCACGGNCAGTGACAAGCATAC
ACAGGNGATGGGTATAATCAACTCCAGGTTTAAGGCCNCTGATGGTA

16510.2.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGCAAGCAGTAAGCCAATTTCCATTAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTTACAGGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGTTCCCTGTACTGGTTACAGAGTAACCACCACTCCCAAAATGG
GACCAGGACCAACAAAACTAAACTGCANGGTCCAGATCAAACAGAAATGACTATTG
AAGGCTTGACGCCACAGTGGAGTATGTGGGTTAGTGTCTATGCTCAGAAATNCCAAGCGG
AGAGAGTCAGCCTCTGGTTCAGACT

FIG. 15UU

16511.1.edit

TCGAGCGGCCGCGCCGGGCAGGTACGCGCTCTCAGGACGTCACCACCATGGCCTGGGCTCT
GCTCCTCCTCACCCTCCTCACTCAGGGCACAGGGTCTGGGCCAGTCTGCCCTGACTCAG
CCTCCTCCTCGCGTCCGGGTCTCCTGGACAGTCAGTCACCATCTCCTGCACTGGAACCAGCA
GTGACGTTGGTGCTTATGAATTGTCTCCTGGTACCAACAACACCCAGGCAAGGCCCCCAA
ACTCATGATTTCTGAGGTCACTAAGCGGCCCTCAGGGGTCCCTGATCGCTTCTCTGGCTCC
AAGTCTGGCAACACGGCCTCCCTGACCGTCTCTGGGCTCCANGCTGAGGATGANGCTGATT
ATTACTGGAAGCTCATATGCAGGCAACAACAATTGGGTGTTTCGGCGGAAGGGACCAAGCT
GACCGTNCTAAGGTCAAGCCCAAGGCTTGCCCCCTCGGTCACTCTGTTCCACCTCCTCT
GAAGAAGCTTTCAAGCCAACAANGNCACACTGGGTGTGTCTCATAAGTGGACTTTCTACCC

16511.2.edit

AGCGTGGTTCGCGGCCGAGGTCTGTAGCTTCTGTGGGACTTCCACTGCTCAGGCGTCAGGCT
CAGGTAGCTGCTGGCCGCGTACTTGTGTGCTTTGNTTGGAGGGTGTGGTGGTCTCCACT
CCCCCTTGACGGGGCTGCTATCTGCCTTCCAGGCCACTGTACGGCTCCCGGGTAGAAGT
CACTTATGAGACACACCAAGTGTGGCCTTGTGGCTTGAAGCTCCTCAGAGGAGGGTGGGA
ACAGAGTGACCGAGGGGGCAGCCTTGGGCTGACCTAGGACGGTCAGCTTGGTCCCTCCGC
CGAACACCCAATTGTTGTGCTGCATATGAGCTGCAGTAATAATCAGCCTCATCCTCAGC
CTGGAGCCCAGAGACNGTCAAGGGAGGCGCGTGTGGCAAGACTTGAAGCCAGANAAG
CGATCAGGGACCCCTGAGGGCCGCTTTACNGACCTCAAAAAATCATGAATTTGGGGGGCC
TTTGCTGGGNGTTGGTTGGTNACCAGNAAAACAAAATTTATAAAGCACCAACGTCCT
GCTGGTTTCCAGTGCANGAANATGGTGAAGTGAANTGTCC

16512.1.edit

AGCGTGGTTCGCGGCCGAGGTCCAGCATCAGGAGCCCCGCTTGCCGGCTCTGGTCATCGCC
TTCTTTTTGTGGCCTGAAACGATGTCATCAATTCGAGTAGCAGAACTGCCGTCTCCACTG
CTGTCTTATAAGTCTGCAGCTTCACAGCCAATGGCTCCCATATGCCAGTTCCTTCATGTCC
ACCAAAGTACCCGTCTCACCATTTACACCCAGGTCTCACAGTTCTCCTGGGTGTGCTTGG
CCCGAAGGGAGGTAAGTANACGGATGGTGTGCTGGTCCACAGTTCTGGATCAGGGTACGAG
GAATGACCTCTAGGGCCTGGGCNACAAGCCCTGTATGGACCTGCCGGGGGGGGCCGCTC
GA

16512.2.edit

TCGAGCGGCCGCGCCGGGCAGGTCCATACAGGGCTGTTGCCAGGCCCTAGAGGNCATTCC
TTGTACCCTGATCCAGAACTGTGGGACCAGCACCATCCGTCTACTTACCTCCCTTCGGGCC
AAGCACACCCAGGAGAACTGTGAGACCTGGGGTGAAATGGNGAGACGGGTACTTTGGTG
GACATGAAGGAACTGGGCATATGGGAGCCATTGGCTGNGAAGCTGCANACTTATAAGACA
GCAGTGGAGACGGCAGTTCTGCTACTGCGAATTGATGACATCGTTTCAGGCCACAAAAG
AAAGGCGATGACCANAGCCGGCAAGGCGGGGCTTCTGATGCTGGACCTCGGCCGCGGAC
CAGCTT

FIG. 15VV

16514.1.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCCAGGCAGAGTCTCTG
CGTTACAAACTCCTAGGAGGGCTTGCTGTGCGGAGGGCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTGCGAGGTTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCTGATGATCCACAGCGGAGACCCTGTAACTA
CTACGTTGACACTGCTGTGCGCCACGTGTTGCTCANACAGGGTGCTGGGCATCAAGGTG
AAGATCATGCTGCCCTGGGACCCANCTGGCAAAAATGGCCCTTAAAAACCCCTTGCCNTG
ACCACGTGAACCATTTGTGNGAACCCCAAGATGAANATACTTGCCACCACCCCCATTC

16514.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCCACCCTTCTGTTCTGAGATGGGGGTGGTGGCAGT
ATCTCATCTTTGGGTTCCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCCAGGGCAGCATGATCTTCACCTTGATGCCAGCACACCCTGTCTGAG
CAACAGTGGCGCACAGCAGTGTCAACGTAGTAGTTAACAGGGTCTCCGCTGTGGATCAT
CAGGCCATCCACAACTTCATGGATTTAGCCCTCTGCTCTGGAGTTTCCAAAAACACCAC
AACCTCGCCAGCCTTTGGGCCCCACTTCTTCATGAATGAAACCGCAGCACACCATTANCA
GGCCCTTCCGCACAGGNAAGCCCTTCTAAGGAGTTTGTAAACGCAAAAAACTCTTGCCCT
GGGCAAATGGGCACACAGACCTNTANTNGGACCTTGGNCCGCGAACCACCGCTT

16515.1.edit

AGCGTGGTCGCGGCCGAGGTCTGCCCTCCTGGCAAGGCTGGTGAAGATGGTCACCCTGG
AAAACCCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTCCC
TGGAATCCTGGACTTCTGGCTTCAAAGGCATTAGGGGACACAATGGTCTGGATGGATTG
AAGGGACAGCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGGNGCCCTGGTGAAAATGGA
ACTCCAGGTCAAACAGGAGCCCGNGGGCTTCTGGNGAGAGAGGACGTGTTGGTGCCCT
GGCCANACCTGCCCGGGCGGCGCTCNAAAAGCCGAAATCCAGNACACTGGCGGCCGNT
ACTANTGGAATCCGAACCTCGGTACCAAAGCTTGGCCGTAATCATGGCCATAGCTTGTTC
CTGGGGNGGAAATTGGTATTCGCTNCCAATCCACACAACATACCGAACCCGGAAGCA
TTAAAGTGTAAGCCCTGGGGGGCCCTAAATGANGTGAGCNTAACTCNCATTTAATTGG
CGTTGCGCTTCACTGCCCCGCTTTCCAGTCCGGGNA

16515.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGGGCCAGGGGCACCAACACGTCTCTCACCAGGA
AGCCACGGGCTCCTGTTGACCTGGAGTTCCATTTTACCAGGGGCACCAGGTTCAACCT
TCACACCAGGAGCACCGGGCTGTCCCTTCAATCCATCCAGACCATTGTGNCCCTAATGCC
TTTGAAGCCAGGAAGTCCAGGAGTTCCAGGGAAACCACGAGCACCTGTGGTCCAACAAC
TCCTCTCACCAGGTGTCGGGTTTCCAGGGTGACCATCTTACCAGCCTTGCCAGGA
GGGCCAGACCTCGGCCGCGACCACGCT

FIG. 15WW

16516.1.edit

ANCGTGGTCGCGGCCGAGGTCCTACCCAGAGGTGNCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCANCAGAGGCATAAGGTTCCGGGAAGAGG

16516.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCCTTCTCTCCAATCTTGT
AGTTCACACCATTTGTCATGGCACCCTAGATGAATCACATCTGAAATGACCCTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGTCCACGGTAACAACCTTCCCGAACCTTATGCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCNGNCCNGAAC
AACGCTTAAGCCCGNATTCTGCAGAATAATCCCATCACACTTGGCGGCCGCTTCGANCATG
CATCNTAAAAGGGGCCCAATTTCCCCCTTATAAGNGAANCCGTATTTNCCAATTTCACTG
GNCCCGCCGNTTTTACAAACGNCGGTGAACTGGGGAAAAACCTGGCGGTTACCCAACTT
TAATCGCCNTTGGCAGCACAAATCCCCCTTTTCGNCCANCNTGGGCGTAAATAACCGAAAA

16517.1.edit

ANCGNGGTCGCGGCCGANGTNTTTTTCTTNTTTTTT

16518.1.edit

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCCGCGGGAGGAGCAGTACAACAGCACGTACCGGNGGTGACGCTCCTCACCCTCCTGCA
CCAGAATTGGTTGAATGGCAAGGAGTACAAGNGCAAGGTTTCCAACAAAGCCNTCCCAGC
CCCCNTCGAAAAAACCATTTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACAC
CCTGCCCCCATCCCGGAGGAAAAGANCAANAACNCGTTTCAGCCTTAACCTTGCTTGGTC
NAANGCTTTTTATCCCAACGNACTTCCCCNTGGAANTGGGAAAAACCAATGGGCCAANC
CGAAAAACAATTACAANAACCC

16518.2.edit

TCGAGCGGCCGCCCCGGGCAGGTGTGCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCATTTGCTCTCCCACTCCACGGCGATGTCGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTGAGGCTGACCTGGTTCTTGGTCACTCTCCCGGGATGGGGGCAGGGTGAA
CACCTGGGGTTCTCGGGGCTTGCCCTTTGGTTTTGAANATGGTTTTCTCGATGGGGGCTGG
AAGGGCTTTGTTGNAACCTTGCACTTGACTCCTTGCCATTACCCAGNCCTGGNGCAGGA
CGGNGAGGACNCTNACCACACGGAACGGGCTGGTGGACTGCTCC

FIG. 15XX

16519.1.edit

AGCGTGGTCGCGGACGANGTCCTGTCAGAGTGGNACTGGTAGAAGTTCCANGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGNGN
CCTGGAATGGGGCCCATGANATGGTTGCC

16519.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGA
AGTGGTCCCTCGGCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAGAGCGAGCCCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCCTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTCGGCACCCCCCTGG
GTATGAACCTGGGAAAANGGNANTTAANCTTTCCTGGCA

16520.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTCACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATTAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTTCAGGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGGTNCCCTGGTACTGGGTACAGANTAACCACCACTCCCCAAAATG
GACCAGGAACCACAAAACTTAACTGCAGGGTCCAGATCAAAACAGAAATGACTATTGA
ANGCTTGCAGCCACAGTGGGAGTATGNGGGTAGTGNCTATGCTTCAGAATCCAAGCGGA
AAAANGTCAAGCCTTNTGGGTTCAA

16520.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTGCAGCTCTGCAGTGTCTTCTTACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAACTT
GCCCCGTGTGGGCTTTCCCAAGCAATTTTGATGGAATCGACATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCAGNCTGAACCAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACACATACTCCACTGTGGGCTGCAANCCTTCAATAANNC
ATTTCTGTTTGATCTGGACC

16521.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTGGTGGGGTCTGGCACACGCACATGGGGGNGTTGNT
CTNATCCAGCTGCCCAGCCCCCATTTGGCGAGTTTGAGAAGGTGTGCAGCAATGACAACAA
NACCTTCGACTCTTCTGCCACTTCTTTGCCACAAAGTGACCCCTGGAGGGCACCAAGAAG
GGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAATACATCCCCCTTGCCTGGACT
CTGAGCTGACCGAATTCCTTGGCGATGCGGGACTGGCTCAAGAACCGTCTTGGCACCC
TTGTATGANAGGGATGAAGACACNACCC

FIG. 15YY

16522.1.edit

AGCGTGGTCGCGGCCGAGGTCTGTCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTG
GTGACCGTGCCCTCCAGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGC
CCAGCAACACCAAGGTGGACAAGAGAGTTGAGCCCAAATCTTGTGACAAAACACACAT
GCCCCAGCGTGCCCGAGCACCTGAACTCCTGGGGGGACCGTCAGTCTTCTCTTCCCCCGCAT
CCCCCTTCCAAACCTGCCCCGGGCGGCGCTCGAAAAGCCGAATTCCAGCACACTGGCGGCCG
GTACTAGTGGANCCNAACCTTGGNANCCAACCTGGNGGAANTAATGGGCATAANCTGTTTC
TGGGGGGAAAATTGGTATCCNGTTTACAATTCCCNACAAACATACGAGCCGGAAGCATAAA
AGNGTAAAAGCCTGGGGGNGGCCTANTGAAGTGAAGCTAAACTCACATTAATTNGCGTTG
CCGCTCACTGGCCCGCTTTTCCAGC

16522.2.edit

TCGAGCGGCCGCCCGGGCAGGTTTGAAGGGGGATGCGGGGAAGAGGAAGACTGACGG
TCCCCCAGGAGTTCAGGTGCTGGGCACGGTGGGCATGTGTGAGTTTGTGACAAGATTG
GGCTCAACTCTCTTGTCCACCTTGGTGTTGCTGGGCTTGTGATCTACGTTGCAGGTGTAGGT
CTGGGNGCCGAAGTTGCTGGAGGGCACGGTCACCACGCTGCTGAGGGAGTAGAGTCCTGA
GGAAGTGTANGACAGACCTCGGCCGNGACCACGCTAAGCCGAATTCTGCAGATATCCATCA
CACTGGCGGCCGCTCCGAGCATGCATTTAGAGG

16523.1.edit

AGCGTGGNCGCGGACGANGACAACAACCCC

16523.2.edit

TCGAGCGGCCGCCCGGGCAGGNCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTGATGCTCTTGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCTT
GCTGATGNACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCA
GTCTCCATGTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCC
AGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTCACGGCAGGTGCGGGCGGG
GTTCTTGACCT

16524.1.edit

AGCGTGGTCGCGGCCGAGGTCCAGCCTGGAGATAANGGTGAAGGTGGTGCCCCCGGACTT
CCAGGTATAGCTGGACCTCGTGGTAGCCCTGGTGAGAGAGGTGAAACTGGCCCTCCAGGA
CCTGCTGGTTTCCCTGGTGCTCCTGGACAGAATGGTGAACCTGGNGGTAAAGGAGAAAGA
GGGGCTCCGGNTGANAAGGTGAAGGAGGCCCTCCTGNATTGGCAGGGGCCCCANGACTT
AGAGGTGGAGCTGGCCCCCTGGCCCCGAAGGAGGAAAGGGTGCTGCTGGTCTCTCTGGG
CCACCTGG

FIG. 15ZZ

16524.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTGGGCCAGGAGGACCAATAGGACCAGTAGGACCCCTT
GGGCCATCTTTCCCTGGGACACCATCAGCACCTGGACCGCCTGGTTACCCCTTGTCACCCCTT
TGGACCAGGACTTCCAAGACCTCCTCTTTCTCCAGGCATTCTTGACAGACCAGGAGTACCA
NCAGCACCAAGGTGGCCAGGAGGACCAGCAGCACCCCTTTCTCCTTCGGGACCAGGGGGA
CCAGCTCCACCTCTAAGTCCTGGGGCCCTGCCAATCCAGGAGGGCCTCCTTACCTTTCTC
ACCCGGAGCCCTCTTTCT

16526.1.edit

TCGAGCGGCCGCCCGGGCAGGTCCACCGGGATATTGGGGGTCTGGCAGGAATGGGAGGC
ATCCAGAACGAGAAGGAGACCATGCAAGCCTGAACGACCGCCTGGCCTCTTACCTGGAC
AGAGTGAGGAGCCTGGAGACCGACAACCGGAGGCTGGAGAGCAAAATCCGGGAGCACTT
GGAGAAGAAGGGACCCAGGTCAGAGACTGGAGCCATTACTTCAAGATCATCGAGGACCT
GAGGGCTCANATCTTCGCAAATACTGCNGACAATGCCCG

16526.2.edit

ATGCGNGGTTCGCGGCCGANGACCANCTCTGGCTCATACTTGACTCTAAAGNCNTACCAG
NANTTACGGNCATTGCCAATCTGCAGAACGATGCGGGCATTGTCCGCANTATTTGCGAAG
ATCTGAGCCCTCAGGNCCTCGATGATCTTGAAGTAANGGCTCCAGTCTCTGACCTGGGGTC
CCTTCTTCTCCAAGTGCTCCCGGATTTTGCTCTCCAGCCTCCGGTTCTCGGTCTCCAAGNCT
TCTACTCTGTCCAGGAAAAGAGGCCAGGCGGNCGATCAGGGCTTTTGCATGGACT

16527.1.edit

AGCGTGGTCGCGGCCGAGGTTGTACAAGCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TT

16527.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTGCCAACACCAAGATTGGCCCCCGCCGATCCACACA
GTTNGTGTGCGGGGAGGTAACAAGAAATACCGTGCCCTGAGGNTGGACGNGGGGAATTC
TCCTGGGGCTCAGAGTGTTGTACTCGTAAAACAAGGATCATCGATGTTGTCTACAATGCAT
CTAATAACGAGCTGGTTTCGTACCAAGACCCTGGTGAAGAATTGCATCGTGCTCATNGACA
GCACACCGTACCGACAGTGGGTACCGAAGTCCCACTATGCNCCT

FIG. 15AAA

16528.1.edit

TCGAGCGGCCGCCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGA
AGTGGTCCCTCGGCCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCATTGCCCTGAAG

16528.2.edit

AGCGTGNTCNCGGCCGAGGATGGGGAAGCTCGNCTGTCTTTTTCCTTCCAATCAGGGGCTN
NNTCTTCTGATTATTCTTCAGGGCAANGACATAAAATTGTATATTCGGNTCCCGGTTCCAGN
CCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCCGAGGGACCACTTCTCTGGGAGGA
GACCCAGGCTTCTCATACTTGATGATGAAGCCGGTAATCCTGGCACGTGGGCGGCTGCCAT
GATACCACCAANGAATTGGGTGTGGTGACCTGCCCCGGCGGGCCGCTCGAAAAANCCGAA
TTCNTGCAAGAATATCCATCACACTTGGGCGGGCCGNTCGAACCATGCATCNTAAAAGGG
CCCCAATTTCCCCCTATTAGNGAAGCCNCATTTAACAAATTCCACTTGG

16529.1.edit

TCGAGCGGCCGCCCGGGCAGGTCTCGCGGTCGCACTGGTGATGCTGGTCCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGTCCCCCTGGTCCTCCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTCGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTTGAGCCA
GCAGAATCGAAAACATTCGGAACCCAAGAAGGGCAAGCCCGCAAAGAAACCCCGCCCGC
ACCTGGCCGNGAACCTCCAAGAANGTGCCACNTCTTGACTGGGAAAAAAAGGGAAAANT
ACTTGGAATTGGAC

16529.2.edit

AGCGTGGTTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTATGCTCTCGCCGAACCAGACATGCCTCTTGCTCTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGAAAGTGGCACATCTTGAGGTCACGGCAGGGTGCGGGCGGG
GTTCTTGCGGGCTGCCCTTCTGGGCTCCCGGAATGTTCTNNGAACTTGCTGG

FIG. 15BBB

16530.1.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCCAGGCAGAGTCTCTG
CGTTACAACTCCTAGGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTGCGAGGTTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGGAGACCCTGTAACTA
CTACGTTGACACTTGCTTGTGCGCCACGTGTTGCTCANACANGGGTGGGCTGGGCATCAAG
GNG

16530.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCCACCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATCTTTGGGTTCCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCCAGGGCAGCATGATCTTCACCTTGATGCCCAGCACACCCTGTCTGAG
CAACACGTGGCGCACAGCAAGTGTCAACGTAAGTAAGTTAACAGGGTCTCCGCTGTGGAT
CATCAGGCCATCCACAACTTCATGGATTAAACCCTCTGTCTCGGAG

16531.1.edit

TCGAGCGGCCGCCCGGGCAGGTGTTTCAGAGGTCCAAGGTCCACTGTGGAGGTCCCAGG
AGTGTCTGGTGGTGGGCACAGAGGTCCGATGGGTGAAACCATTGACATAGAGACTGTTCTT
GTCCAGGGTGTAGGGGCCAGCTCTTTGATGCCATTGGCCAGTTGGCTCAGCTCCCAGTAC
AGCCGCTCTCTGTTGAGTCCAGGGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCA
CTCCAGTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTGAGTCTGCAGCCAGAGTACAG
AGGGCCAACACTGGTGTCTTTGAATA

16531.2.edit

AGCGTGGTCGCGGCCGAGGTCTGTACTGGGAGCTAAGCAAACCTGACCAATGACATTGAAG
AGCTGGGCCCCCTACACCCTGGACAGGAACAGTCTCTATGTCAATGGTTTCACCCATCAGAG
CTCTGTGNCCACCACCAGCACTCCTGGGACCTCCACAGTGGATTTCAGAACCTCAGGGACT
CCATCCTCCCTCTCCAGCCCCACAATTATGGCTGCTGGCCCTCTCCTGGTACCATTACCCCT
CAACTTCACCATCACCAACCTGCAGTATGGGGAGGACATGGGTACCCCTGNCTCCAGGAA
GTTCAACACCACA

16532.1.edit

TCGAGCGGCCGCCCGGACAGGTCTGGGCGGATAGCACCGGGCATATTTTGAATGGATGA
GGTCTGGCACCCCTGAGCAGTCCAGCGAGGACTTGGTCTTAGTTGAGCAATTTGGCTAGGAG
GATAGTATGCAGCACGGNTCTGAGNCTGTGGGATAGCTGCCATGAAGTAACCTGAAGGAG
GTGCTGGCTGGTANGGGTTGATTACAGGGTTGGGAACAGCTCGTACACTTGCCATTCTCTG
CATATACTGGTTAGTGAGGTGAGCCTGGCCCTCTCTTTTG

01_16558.3.edit

AGCGTGGTCGCGGCCGAGGTGAGCCACAGGTGACCGGGGCTGAAGCTGGGGCTGCTGGNC
CTGCTGGTCCTG

02_16558.4.edit

CAGCNGCTCCNACGGGGCCTGNNGGACCAACAACACCGTTTTACCCCTTAGGCCCTTTGGC
TCCTCTTTCTCCTTTAGCACCAGGTTGACCAGCAGCNCCANCAGGACCAGCAAATCCATTG
GGGCCAGCAGGACCGACCTACCAACGTTACCAAGGGCTTCCCCGAGGACCAGCAGGACCA
GCAGGACCAGCAGCCCCAGCTTCGCCCCGGTCACCTGTGGCTCACCTCGGCCGCGACCACG
CT

03_16535.1.edit

TCGAGCGGTGCCCCGGGCAGGTCCACCGGGATAGCCGGGGGTCTGGCAGGAATGGGAGGC
ATCCAGAACGAGAAGGAGACCATGCAAAGCCTGAACGACCGCCTGGCCTCTTACCTGGAC
AGAGTGAGGAGCCTGGAGACCGANAACCGGAGGCTGGANAGCAAAATCCGGGAGCACTT
GGAGAAGAAGGGACCCAGGTCAAGAGACTGGAGCCATTACTTCAAGATCATCGAGGGA
CCTGGAGG

04_16535.2.edit

AGCGNGGTGCGGGCCGAGGTCCAGCTCTGTCTCATACTTGA CTCTAAAGTCATCAGCAGCA
AGACGGGCATTGTCAATCTGCAGAACGATGCGGGCATTGTCCGCAGTATTTGCGAAGATCT
GAGCCCTCAGGTCTCGATGATCTTGAAGTAATGGCTCCAGTCTCTGACCTGGGGTCCCTT
CTTCTCCAAGTGCTCCCGGATTTTGCTCTCCAGCCTCCGGTTCTCGGTCTCCAGGCTCCTCA
CTCTGTCCAGGTAAGAAGGCCAGGCGGTGTTTCAAGGCTTTGCATGGTCTCCTTCTCGTTCT
GGATGCCTCCCATTCCTGCCAGACCC

05_16536.1.edit

TCGAGCGGCCCGCCCCGGGCAGGTGAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGA
TTCCACCTGTGCTGCGGACATCTCCAGGGAGTGCAGAAGGGAAGCAGGTCAAAGTCTCA
GATCAGTCAGACTGGCTGTTCTCAGTTCTCACCTGAGCAAGGTCAGTCTGCAGCCAGAGTA
CAGAGGGCCAACACTGGTGTTCTTGAACAAGGGCTTGAGCAGACCCTGCAGAACCCTCTTC
CGTGGTGTTGAACTTCCTGGAAACCAGGGTGTTGCATGTTTTCTCATAATGCAAGGTTG
GTGATGG

FIG. 15DDD

07_16537.1.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGTCCCTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGCAGGTCTCACCAG
TCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCA
GTACTCTCCACTCTTCCAGTCAGAAGTGGGCACATCTTGAGGTCACCGGCAGGTGCCGGGC
CGGGGGTTCTTGCGGCTTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTTGGCTCAGGCTC
TTGAGGGTGGGTGTCCACCTCGAGGTCACGGTCACCGAAACCTGCCCCGGCGGCCCGCTC
GA

08_16537.2.edit

TCGAGCGGTGCCCCGGGCAGGTTTCGTGACCGTGACCTCGAGGTGGACACCACCCTCAAG
AGCCTGAGCCAGCAGATCGAGAACATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGC
CCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGT
GAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGGCCCAGAAGAACTGGTACATCAGCA
AGGAACCCCAAGGACAAGAGGCATTGTCTTGGTTCGGCGAGNAGCATGACCCGATGGATT
CCAGTTTCGAGTATTGGCGGCCAGGGCTTCCCACCTTGCCGATGTGGACCTCGGCCGCG
ACCACCGCT

FIG. 15EE

FIG. 15EE

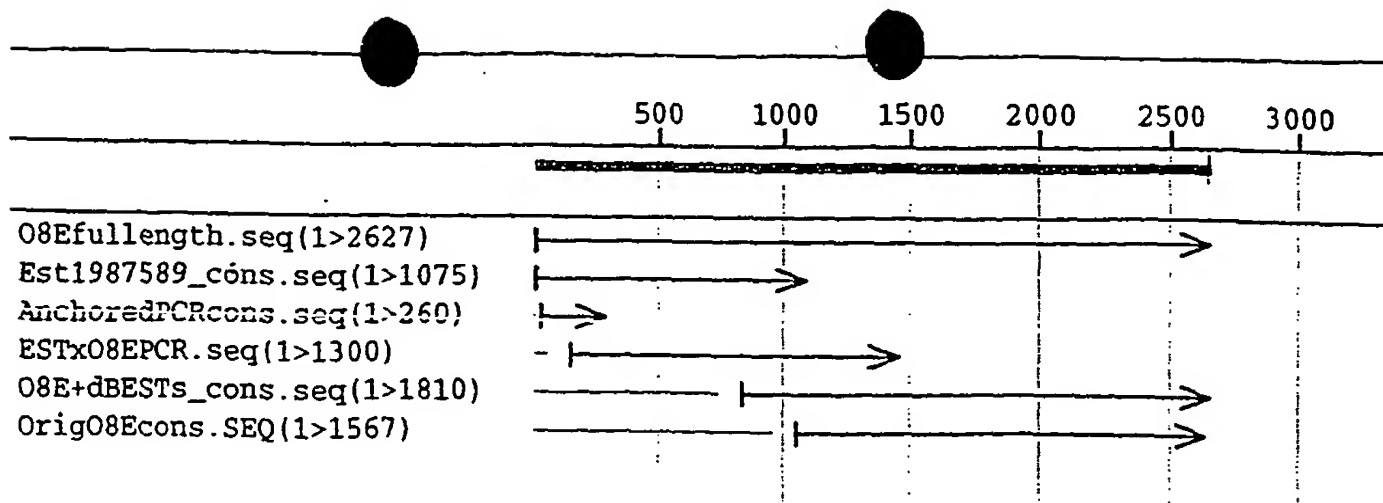


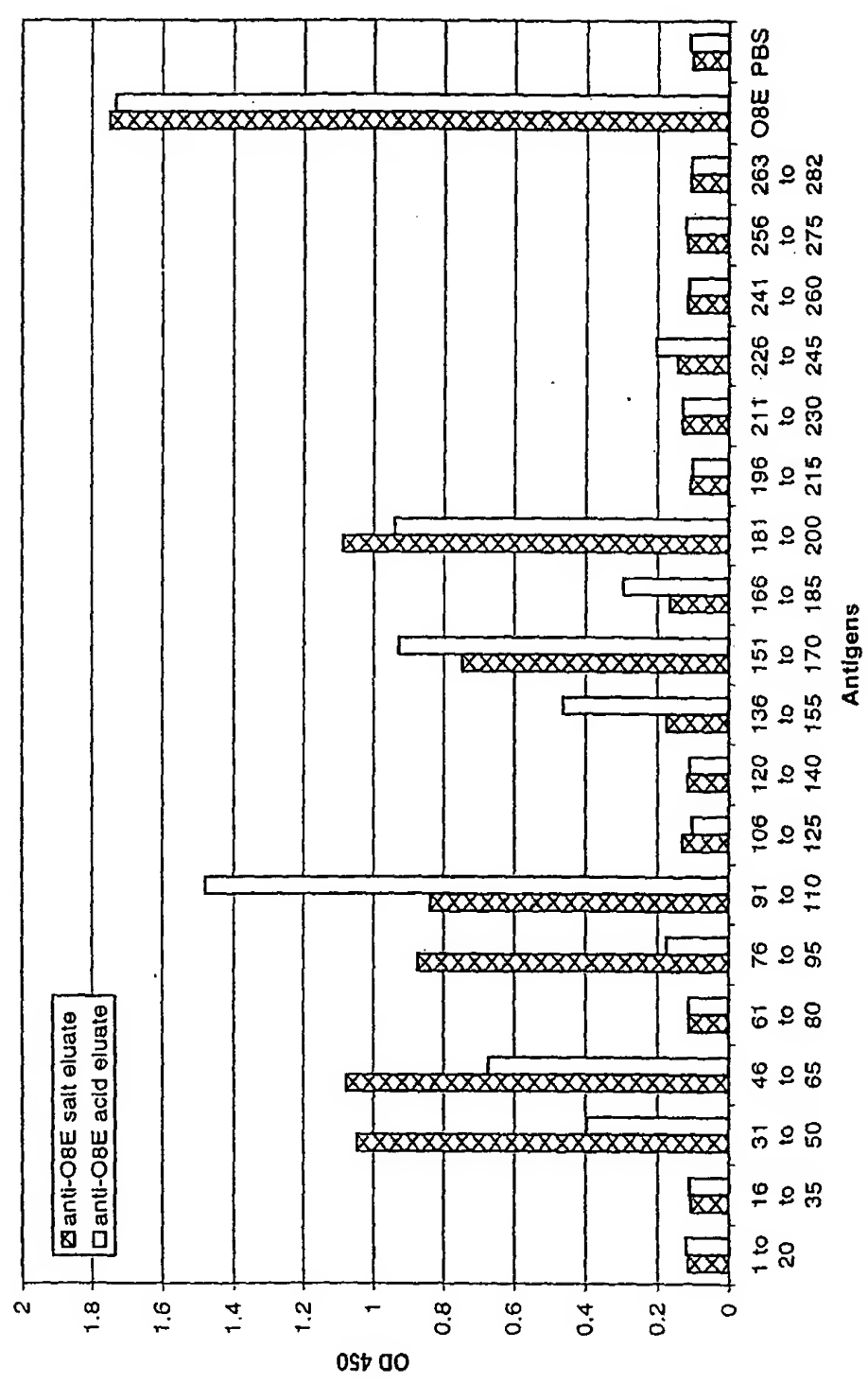
Fig. 1b

AR

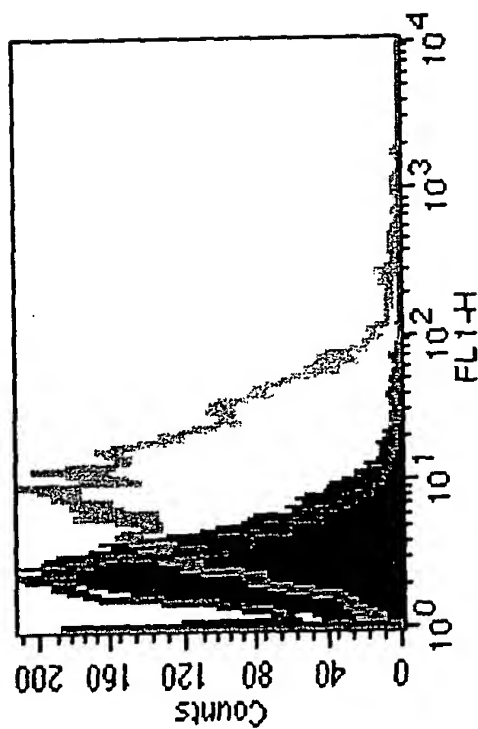
56

Fig. 17

O8E Epitope Mapping



O8E Surface Expression

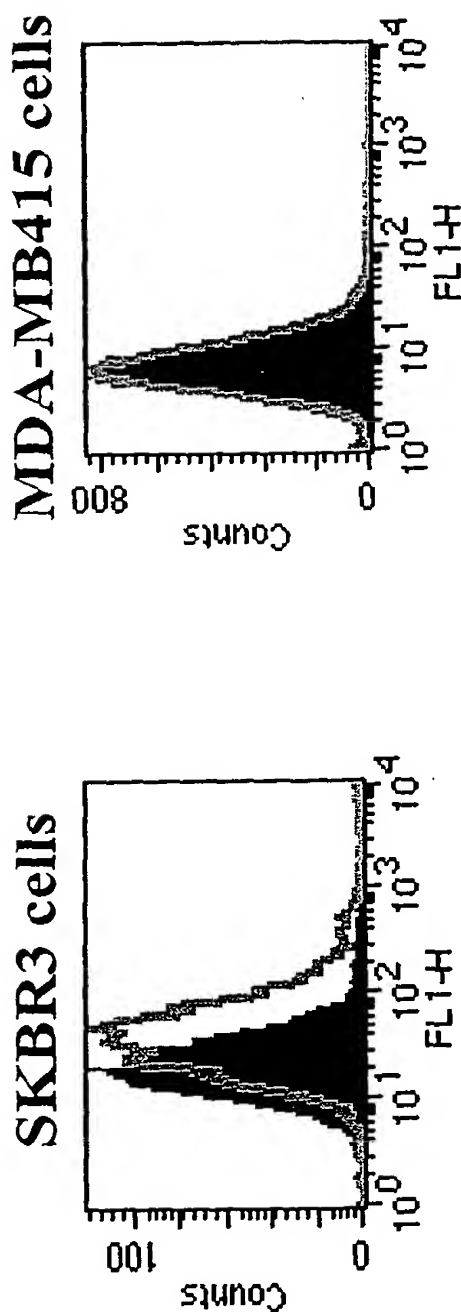


- B305D/HEK stained with anti -O8E antibody
- O8E/HEK stained with anti -O8E antibody
- O8E/HEK stained with an irrelevant antibody

Fig. 18

FOIb040 " 12/2000

Surface expression of O8E

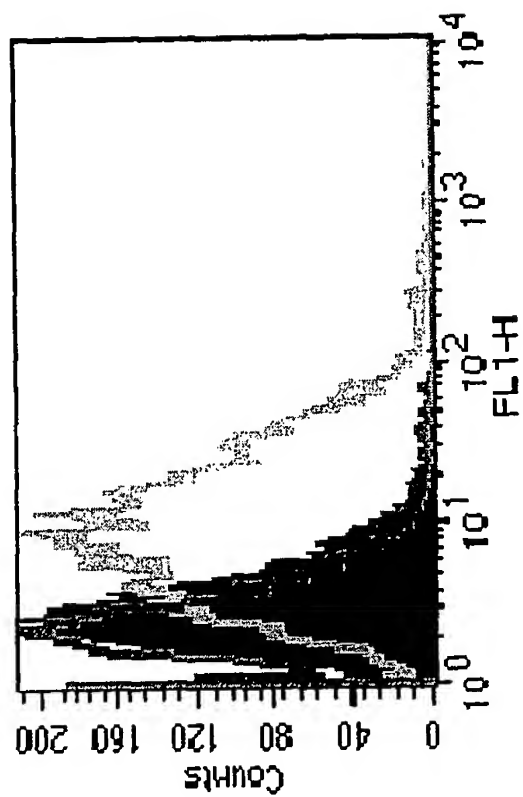


Blue; irrelevant antibody
Green; anti-O8E antibody

Fig. 19

104040 722350

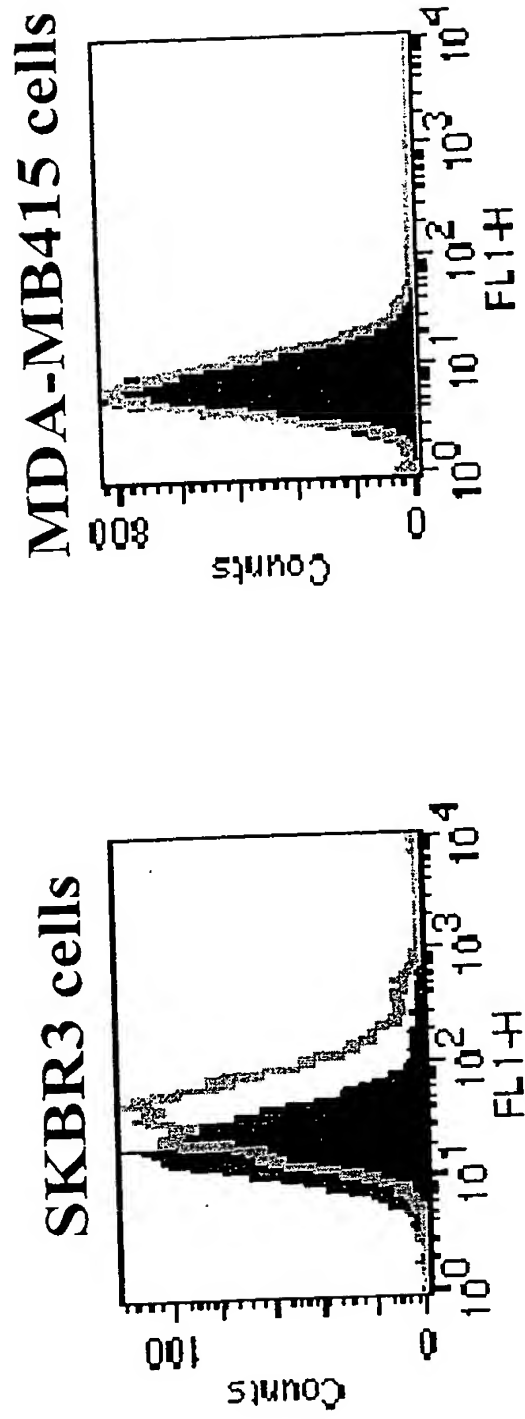
O8E Surface Expression



- B305D/HEK stained with anti-O8E antibody
- - - O8E/HEK stained with anti-O8E antibody
- O8E/HEK stained with an irrelevant antibody

FIGURE 20

Surface expression of 08E



Black: Irrelevant antibody
 Light Grey: Anti-08E antibody

Figure 21

O8E expression in HEK293 Cells

(probed with anti-O8E rabbit polyclonal sera #2333L)

Photo: T222859

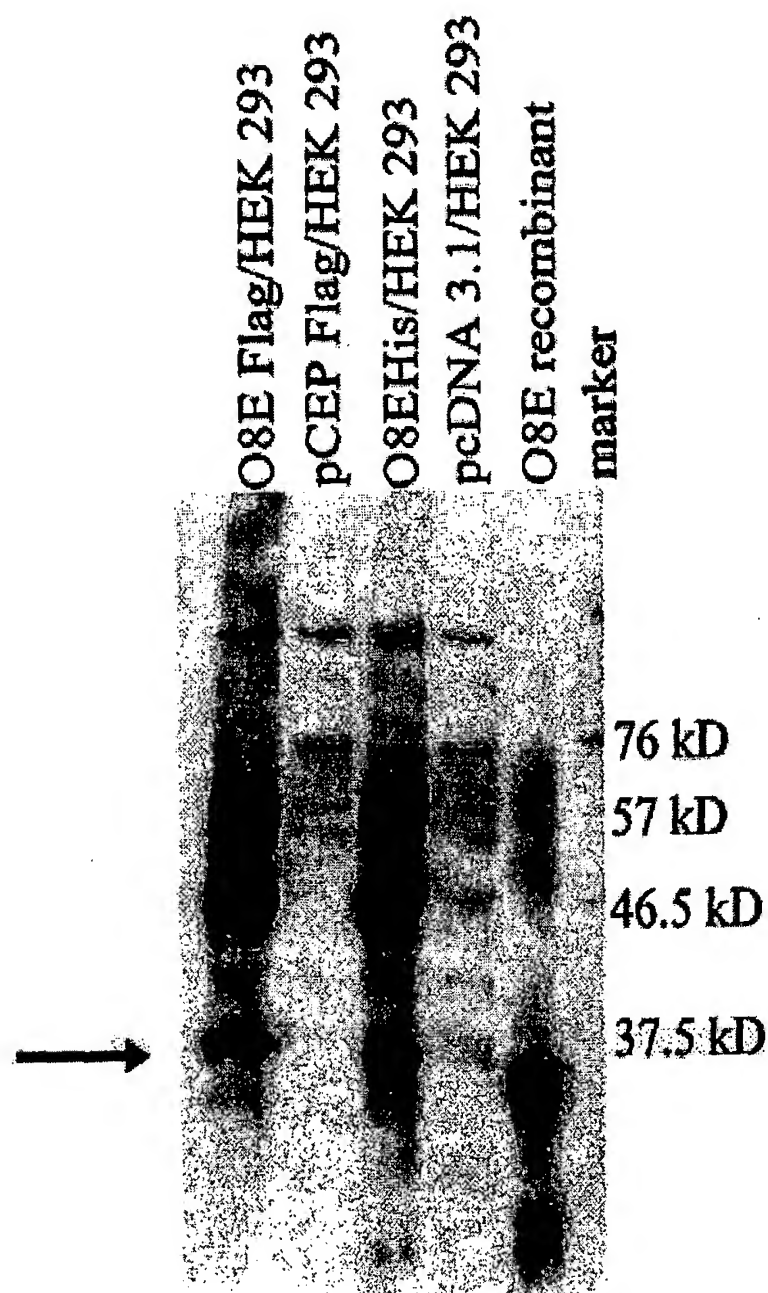


FIGURE 22

0

08E Rabbits 01212000

08E Rabbits 01212000

Date:1/21/99

Antigen on Plate O8E (#632-24)	Sera Sample	Antibody Dilutions											
		1:1000	1:2000	1:4000	1:8000	1:16000	1:32000	1:64000	1:128000	1:256000	1:512000	1:1024000	1:2048000
	Prelimmune sera (#2576L):1/10/99	0.13	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07
	Average	0.11	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07
	α-O8E (#2576K): 1/11/2000	2.92	2.81	2.74	2.70	2.58	2.08	1.61	1.01	0.68	0.40	0.24	0.15
		2.93	2.77	2.74	2.69	2.48	2.08	1.57	1.00	0.66	0.40	0.23	0.16
	Average	2.93	2.79	2.74	2.69	2.53	2.08	1.59	1.00	0.67	0.40	0.23	0.16
	Prelimmune sera (#2333L):1/10/99	0.09	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
		0.08	0.07	0.06	0.07	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	Average	0.08	0.07	0.06	0.06	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	α-O8E (#2333L): 1/11/2000	2.73	2.75	2.64	2.48	2.30	1.78	1.41	0.92	0.58	0.32	0.20	0.14
		2.73	2.76	2.51	2.60	2.37	1.93	1.44	0.88	0.58	0.35	0.20	0.14
	Average	2.73	2.76	2.57	2.54	2.33	1.85	1.43	0.90	0.58	0.33	0.20	0.14

99

FIGURE 23

aff-pure O8E #2576L 739.87A&B

Antibody Name	O8E polyclonal
Rabbit #, Bleed Date	2576L, 1/11/2000
Purification Method	affinity
Buffer	PBS
Notebook	#705, p150
lot #	739.87A
Antibody Concentration	1.4mg/ml
Initial Amount	18mg
	739.87B
	1.7mg/ml
	3mg

Antigen on Plate	Sera Sample	Antibody Dilutions											
		1:1000	1:2000	1:4000	1:8000	1:16000	1:32000	1:64000	1:128000	1:256000	1:512000	1:1024000	1:2048000
#632-24	preimmune sera (2576L)	0.15	0.11	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.08	0.07	0.08
		0.14	0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	Average	0.14	0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.08
	α-O8E (2576L): 2/8/2000	2.74	2.71	2.83	2.49	2.29	1.87	1.39	0.92	0.57	0.33	0.20	0.14
		2.72	2.68	2.84	2.47	2.26	1.93	1.42	0.94	0.57	0.34	0.21	0.14
	Average	2.73	2.70	2.83	2.48	2.27	1.90	1.41	0.93	0.57	0.34	0.21	0.14
	affinity pure α-O8E poly salt peak 739-87A	2.69	2.60	2.50	2.21	1.83	1.34	0.89	0.64	0.38	0.22	0.15	0.11
		2.59	2.48	2.38	2.21	1.82	1.33	1.00	0.82	0.37	0.22	0.14	0.11
	Average	2.64	2.54	2.44	2.21	1.83	1.34	1.00	0.63	0.37	0.22	0.15	0.11
	affinity pure α-O8E poly acid peak 739-87B	2.46	2.39	2.40	2.34	2.08	1.73	1.28	0.81	0.49	0.29	0.19	0.13
		2.65	2.66	2.61	2.45	2.14	1.76	1.30	0.82	0.48	0.29	0.19	0.13
	Average	2.56	2.53	2.51	2.39	2.11	1.74	1.30	0.81	0.49	0.29	0.19	0.13

FIGURE 24

Anti-O8E mAb Binding to O8E Amino Acids 61-80 Induces Ligand Internalization

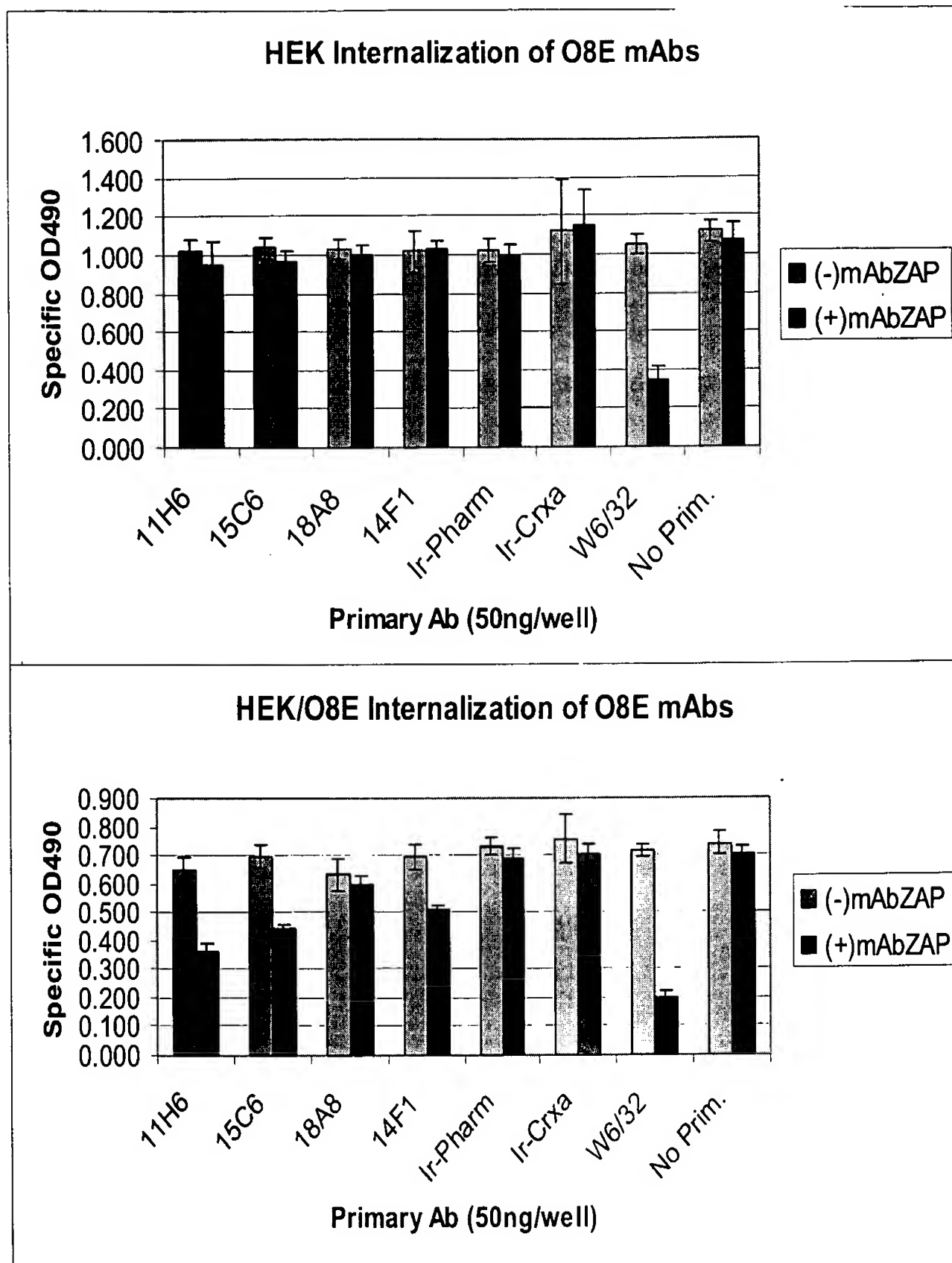


Figure 25